

File 155:MEDLINE(R) 1951-2005/Mar W3
(c) format only 2005 The Dialog Corp.
File 5:Biosis Previews(R) 1969-2005/Mar W2
(c) 2005 BIOSIS
File 73:EMBASE 1974-2005/Mar W2
(c) 2005 Elsevier Science B.V.
File 34:SciSearch(R) Cited Ref Sci 1990-2005/Mar W2
(c) 2005 Inst for Sci Info
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info

Set	Items	Description
S1	43	(AU=SCHMOTZER H? OR AU=SCHMOTZER, H?)
S2	391	AU=SCHULER P? OR AU=SCHULER, P?
S3	13	AU=MALZER U? OR AU=MALZER, U?
S4	445	S1:S3
S5	433448	KNEE OR FEMUR OR FEMORAL
S6	313462	PROSTHE? OR ENDOPROSTHE?
S7	45128	CONDYL?
S8	38	S4 AND S5
S9	0	S7 AND S8
S10	19	S6 AND S8
S11	14	RD (unique items)
S12	14	Sort S11/ALL/PY,A
S13	0	S1:S3 AND S7
S14	19	S8 NOT S10
S15	14	RD (unique items)
S16	14	Sort S15/ALL/PY,A

12/6/8 (Item 8 from file: 5)
0013516022 BIOSIS NO.: 200200109533
Endoprosthetic knee joint
1998

12/6/9 (Item 9 from file: 73)
11096929 EMBASE No: 2001114363
The long term (8-12) results of valgus and lengthening osteotomy of the
femoral neck
2001

12/6/11 (Item 11 from file: 5)
0013480537 BIOSIS NO.: 200200074048
Cup for a knee -joint prosthesis
2001

12/6/14 (Item 14 from file: 5)
0015001042 BIOSIS NO.: 200400371831
Knee -joint endoprosthesis
2004

12/9/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2005 The Dialog Corp. All rts. reserv.
09490893 PMID: 1876400
[2- to 5-year follow-up of cementless implantable knee joint
prosthesis of the Miller-Galante type]
Zwei- bis Funfjahresergebnisse mit der zementfrei einsetzbaren

Kniegelenkprothese vom Typ Miller-Galante.

Kienapfel H; Griss P; Orth J; Roloff K; Malzer U

Orthopadische Klinik und Poliklinik, Philipps-Universität Marburg/Lahn.

Der Orthopade (GERMANY) Jun 1991, 20 (3) p189-96, ISSN 0085-4530

Journal Code: 0331266

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

Based on a prospective study protocol, the two- to five-year results of the Miller-Galante cementless total **knee arthroplasty** are presented. Sixty-four **implants** were placed in 59 patients: 60 **implantations** were cementless and 4 cemented. Clinically, the scores for pain, range of motion, walking and stair climbing improved significantly. Radiographically, the uncemented components displayed no signs of definite or possible loosening, whereas one of the cemented components was found to be definitely loose. On histological evaluation of the retrieved **implants**, all components had bone ingrowth.

Tags: Comparative Study; Female; Male

Descriptors: ***Knee Prosthesis** --methods--MT; Aged; Follow-Up Studies; Humans; **Knee Prosthesis** --adverse effects--AE; **Knee Prosthesis** --instrumentation--IS; Middle Aged; Osteoarthritis--surgery--SU; **Prosthesis Design**; Time Factors

Record Date Created: 19910925

Record Date Completed: 19910925

16/6/2 (Item 2 from file: 73)

02143478 EMBASE No: 1982184594

Osteochondrosis dissecans of the patella

OSTEOCHONDROSIS DISSECANS PATELLAE

1982

16/6/4 (Item 4 from file: 73)

03806454 EMBASE No: 1988255894

Results of arthroscopic and conventional **knee** surgery in relation to the way and duration of the **postoperative** treatment

VERGLEICHENDE ERGEBNISSE OFFENER ODER TRANSARTHROSKOPISCHER OPERATIONEN AM KNIEGELENK UNTER BERÜCKSICHTIGUNG DER ART UND DAUER DER NACHBEHANDLUNG
1988

16/6/5 (Item 5 from file: 5)

0006889373 BIOSIS NO.: 199038067264

A SYSTEM FOR THE ANALYSIS OF THE BIOMECHANICS OF THE **KNEE** IN IN-VITRO TESTS

1989

16/6/9 (Item 9 from file: 155)

09367219 PMID: 1826398

[Autologous cartilage-bone transplantation in the therapy of osteochondrosis dissecans of the **knee joint**]

Das autologe Knorpel-Knochen-Transplantat zur Therapie der Osteochondrosis dissecans des Kniegelenkes.

Jan-Feb 1991

16/6/14 (Item 14 from file: 5)
0013078352 BIOSIS NO.: 200100250191
Implant delivery device in the treatment of trochanter and subtrochanter
fractures
2000

16/9/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2005 The Dialog Corp. All rts. reserv.

12474340 PMID: 9784813
Isometry of the **posterior** cruciate ligament. Effects of functional load
and muscle force application.

Ortiz G J; Schmotzer H; Bernbeck J; Graham S; Tibone J E; Vangsness C T
University of Southern California, School of Medicine, Department of
Orthopaedic Surgery, Los Angeles 90033-4608, USA.

American journal of sports medicine (UNITED STATES) Sep-Oct 1998, 26
(5) p663-8, ISSN 0363-5465 Journal Code: 7609541

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

The effects of functional load and muscle force application on isometry
of the **posterior** cruciate ligament were determined. Eight fresh-frozen
cadaver **knees** were mounted in a custom-designed rig. A full range of motion
and muscle forces were applied through the quadriceps, hamstring, and
gastrocnemius tendons during a simulated static squat maneuver. The
low-load isometric **posterior** cruciate ligament point was located 5.63 mm
proximal and 0.18 mm anterior to the anatomic center of the **posterior**
cruciate ligament origin on the **femur**. The high-load state, with no
gastrocnemius and hamstring muscle forces applied, shifted the isometric
point 6.32 mm proximal and 6.72 mm anterior ($P < 0.05$). Loading the
hamstring and gastrocnemius muscles also shifted the isometric point ($P <$
0.05). This study indicated that the most isometric region of the **posterior**
cruciate ligament **femoral** attachment changed significantly when
functional loads and muscle forces were applied to the **knee**. This finding
may have implications for both surgical reconstruction and rehabilitation
of the **posterior** cruciate ligament-injured **knee**.

Descriptors: ***Knee** Joint--physiology--PH; *Muscle, Skeletal--physiology
--PH; ***Posterior** Cruciate Ligament--physiology--PH; Cadaver; **Femur**
--anatomy and histology--AH; **Femur** --physiology--PH; Humans; Isometric
Contraction--physiology--PH; **Knee** Joint--anatomy and histology--AH;
Muscle, Skeletal--anatomy and histology--AH; **Posterior** Cruciate Ligament
--anatomy and histology--AH; Range of Motion, Articular--physiology--PH;
Signal Processing, Computer-Assisted; Stress, Mechanical; Tendons--anatomy
and histology--AH; Tendons--physiology--PH; Tendons, Para-Articular
--anatomy and histology--AH; Tendons, Para-Articular--physiology--PH

Record Date Created: 19981217

Record Date Completed: 19981217

File 155:MEDLINE(R) 1951-2005/Mar W3

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Set	Items	Description
S1	5256	'KNEE PROSTHESIS' OR DC='E7.695.400.410.'
S2	3361	'ARTHROPLASTY, REPLACEMENT, KNEE' OR DC='E4.555.110.110.11-5.' OR DC='E4.650.110.115.' OR 'KNEE REPLACEMENT, TOTAL'
S3	15706	CONDYL?
S4	247047	DORSAL? OR BACK OR POSTERIOR OR REAR
S5	226485	RESECT? OR EXCIS? OR (CUT OR CUTS OR CUTTING) (2W) (OUT OR OFF) OR CUTOUT? OR SCOOP? OR CARV?
S6	196779	CURV? OR ARCH???
S7	2265395	SURGERY/DE OR METHOD? ?/DE
S8	10	S2 AND S3 AND S4 AND S5:S6 AND S7
S9	10	RD (unique items)
S10	7	S9/2000:2005
S11	3	S9 NOT S10
S12	1431339	METHODS/DE
S13	1188	S2 AND S12
S14	403	S3(3N)S4
S15	21	S13 AND S14
S16	15	S15 NOT S8
S17	12	S16/2000:2005
S18	3	S16 NOT S17
S19	92	S13 AND S5:S6
S20	69055	ANGL???
S21	65	S13 AND S20
S22	69141	S19:S21
S23	100492	FEMUR OR FEMORAL
S24	3072	(S3 OR S23) AND S20:S21
S25	85	(S3 OR S23) AND (S19 OR S21)
S26	76	S25 NOT (S8 OR S15)
S27	62	S26/2000:2005
S28	14	S26 NOT S27

11/7,K/1

DIALOG(R) File 155:MEDLINE(R)

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13324330 PMID: 10101323

The clinical significance of proximal tibial **resection** level in total **knee arthroplasty**.

Ritter M A; Montgomery T J; Zhou H; Keating M E; Faris P M; Meding J B
Kendrick Memorial Hospital, Center for Hip and **Knee** Surgery, Mooresville,
IN 46158, USA.

Clinical orthopaedics and related research (UNITED STATES) Mar 1999,
(360) p174-81, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Clinical and radiographic data were collected in 139 patients with 195 **posterior** cruciate retaining total **condylar knee prostheses** to evaluate the relationship of the proximal tibial **resection** level with long term results. Among the 139 patients were 75 patients with 106 total **knee replacements** observed for more than 8 years. All patients underwent

biyearly routine examinations, including radiographs and clinical evaluations. The average medial tibial **resection** for the 139 patients with 195 total **knee replacements** was 2.95 mm, and in the subset of 75 patients (106 **knees**) observed for more than 8 years, it was 3.3 mm; both groups had a maximum of 14 mm. Sixty-three percent or 67 **knees** had medial **resection** levels of 3 mm or less. The average lateral tibial **resection** for the 195 **knees** was 5.48 mm and in the 106 **knees** was 5.71 mm, with a maximum of 22 mm. Fifty-one percent of 104 **knees** had lateral **resection** levels of 5 mm or less. Statistical analysis showed that there was no significant correlation between the level of proximal tibial **resection** and Knee Society knee score, range of motion, radiolucencies, or loosening or revision. These long term results suggest that minimal proximal tibial **resection** is not necessary for a successful **arthroplasty**, and problems associated with minimal **resection**, such as joint line elevation and thin polyethylene inserts, can be avoided.

Record Date Created: 19990415

Record Date Completed: 19990415

Descriptors: ***Arthroplasty**, **Replacement**, **Knee** -- methods --MT;
***Osteotomy**; ***Tibia**-- surgery --SU

11/7,K/2

DIALOG(R) File 155:MEDLINE(R) .

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12490365 PMID: 9802660

Patellofemoral complications in symmetrical total **knee arthroplasty**.

Harwin S F

Department of Orthopaedic Surgery, Beth Israel Medical Center, New York, New York, USA.

Journal of **arthroplasty** (UNITED STATES) Oct 1998, 13 (7) p753-62,
ISSN 0883-5403 Journal Code: 8703515

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A review of 356 Kinemax (Howmedica, Inc, Rutherford, NJ) cemented **posterior** cruciate ligament-retaining **condylar** total **knee** arthroplasties employing a symmetrical **femoral** component articulating with a medially offset symmetrical dome patella component was carried out to examine the results and determine the incidence and nature of the **patellofemoral** complications. Follow-up was from 3 to 8 years, with a mean of 5.1 years. A review of **patellofemoral** complications in previously reported homogeneous series of symmetrical and asymmetrical **implants** is presented. Mean **postoperative** Knee Society scores improved to 91, function scores to 86, and Hospital of Special Surgery scores to 90 yielding 95% good and excellent results. Mean **postoperative** range of motion was -1.5 degrees extension to 113 degrees flexion. There were five **patellofemoral** complications (1.4%), including two symptomatic subluxations, two distal pole avulsion fractures, and one lateral facet fracture. There were two reoperations necessary for **patellofemoral** problems (0.56%), one to correct subluxation and one for **excision** of the fractured lateral facet. These rates are lower than those previously reported for asymmetrical **implants** as well as current and phased-out symmetrical designs of total **knee arthroplasty** in the intermediate term. This review suggests that cemented

total **knee arthroplasty** with symmetrical patellofemoral resurfacing with an offset patella dome and **posterior** cruciate ligament retention yields low patellofemoral complications and reoperations. The symmetrical femoral component appears to be a satisfactory compromise of "normal" femoral anatomy, which decreases inventory and cost without adversely affecting patellofemoral function and complications.

Record Date Created: 19990107

Record Date Completed: 19990107

Descriptors: ***Arthroplasty, Replacement, Knee** --adverse effects--AE; ***Femur**; ***Joint Instability--etiology--ET**; ***Patella**; ***Postoperative Complications**; **Adult**; **Aged**; **Aged, 80 and over**; **Femur-- surgery --SU**; **Follow-Up Studies**; **Humans**; **Joint Instability--physiopathology--PP**; **Joint Instability--radiography--RA**; **Middle Aged**; **Patella-- surgery --SU**; **Posterior Cruciate Ligament**; **Postoperative Complications-- surgery --SU**; **Prostheses and Implants**; **Range of Motion, Articular**; **Reoperation**; **Retrospective Studies**

11/7,K/3

DIALOG(R)File 155:MEDLINE(R)

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11740066 PMID: 10677975

[Total **knee replacement** of severe flexion contracture deformities greater than 60 degree]

Lu S; Lin J; Kou B

Arthritis Clinical and Research Center, People's Hospital, Beijing Medical University.

Zhonghua wai ke za zhi Chinese journal of surgery (CHINA) Jul 1997, 35 (7) p414-7, ISSN 0529-5815 Journal Code: 0153611

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: CHINESE

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The technique of total **knee arthroplasty** for the patients with severe flexion contractures of more than 60 degrees is not clear. Recently, We have performed 37 total **knee arthroplasties** in 23 patients with flexion contracture of more than 60 degrees (average 77.97 degrees). Among them, 14 **knees** (37.9%) with flexion contracture of more than 90 degrees, and 7 **knees** (18.0%) with 90 degrees flexion fusion deformities. Significant improvements occurred after averaged 4.3-year follow-up. Complications occurred in four patients: three had transient peroneal-nerve palsy, and one had temporary circulatory disturbance of the lower extremity. They recovered after conservative therapy. We consider that severe flexion contracture of more than 60 degrees is not a contraindication of TKR. Staged bone **resection** and thoroughly soft-tissue release of the **posterior** capsule and collateral ligament balance were the critical procedure. If necessary, **additional distal femoral condyle resection with posterior cruciate ligament sacrifice** can be considered.

Record Date Created: 20000505

Record Date Completed: 20000505

Descriptors: ***Arthritis, Rheumatoid-- surgery --SU**; * **Arthroplasty, Replacement, Knee** ; ***Contracture-- surgery --SU**; ***Joint Deformities, Acquired-- surgery --SU**; **Adult**; **Follow-Up Studies**; **Humans**; **Knee Joint-- surgery --SU**; **Knee Prosthesis**; **Middle Aged**; **Spondylitis, Ankylosing--**

surgery --SU

18/7,K/1

DIALOG(R)File 155:MEDLINE(R)

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12628769 PMID: 10546617

Total **condylar knee arthroplasty**. 16- to 21-year results.

Gill G S; Joshi A B; Mills D M

Clinical orthopaedics and related research (UNITED STATES) Oct 1999,

(367) p210-5, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

This study presents long term results of **arthroplasty** with **posterior** cruciate retention using the Total **Condylar Knee implant**. From 1976 to 1982, 139 patients had 159 **knee** arthroplasties using Total **Condylar Knee prostheses**. Sixty-three patients (72 **knees**) were available for followup at a minimum of 16 years (range, 16-21 years). The average age of the patients at the time of surgery was 61 years. There were 21 men and 42 women. Patients with 68 **knees** had osteoarthritis, three had rheumatoid arthritis and one had **posttraumatic** arthritis. There were five delayed complications. One patient (one **knee**) underwent revision surgery and two patients (two **knees**) declined revision surgery because they were considered to be high surgical risks, as determined by their internists. The average preoperative score was 40.3 points and improved to 88.4 points at followup. Eighty-seven percent of the patients had a score equal to or more than 85 points at last evaluation. **Prosthesis** survivorship at 20 years was 98.6% for patients who had revision surgery. No **femoral** components were revised for aseptic loosening. Retention of the **posterior** cruciate in Total **Condylar Knee prosthesis** produces results comparable with the results of the original Total **Condylar Knee prosthesis** with cruciate sacrifice.

Record Date Created: 19991118

Record Date Completed: 19991118

Descriptors: ***Arthroplasty, Replacement, Knee ; *Knee Prosthesis; Adult; Aged; Aged, 80 and over; Arthritis, Rheumatoid--surgery--SU; Arthroplasty, Replacement, Knee -- methods --MT; Follow-Up Studies; Humans; Middle Aged; Osteoarthritis, Knee--surgery--SU; Prosthesis Failure; Reoperation; Survival...**

18/7,K/2

DIALOG(R)File 155:MEDLINE(R)

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12628748 PMID: 10546596

The Ranawat Award. **Femoral** component rotation during total **knee arthroplasty**.

Olcott C W; Scott R D

Department of Orthopaedic Surgery, University of Rochester Medical Center, New York 14642, USA.

Clinical orthopaedics and related research (UNITED STATES) Oct 1999,

(367) p39-42, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

One-hundred consecutive **posterior** cruciate retaining total **knee** arthroplasties were performed by one surgeon in 81 patients with an average age of 69 years. Diagnoses included osteoarthritis in 93 **knees** and rheumatoid arthritis in seven. The **femoral** alignment necessary to create a rectangular flexion gap was determined and compared with Whiteside's line, the transepicondylar axis, and a line in 3 degrees external rotation relative to the **posterior condyles** of the **femur**. The transepicondylar axis most consistently recreated a balanced flexion space whereas 3 degrees external rotation off the **posterior condyles** was least consistent especially in **knees** in valgus.

Record Date Created: 19991118

Record Date Completed: 19991118

Descriptors: *Arthroplasty, Replacement, Knee -- methods --MT

28/7,K/1

DIALOG(R) File 155:MEDLINE(R)

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13450993 PMID: 10418867

A new technique for determining proper mechanical axis alignment during total **knee arthroplasty**: progress toward computer-assisted TKA.

Krackow K A; Bayers-Thering M; Phillips M J; Bayers-Thering M; Mihalko W M

Department of Orthopedic Surgery, State University of New York at Buffalo, USA.

Orthopedics (UNITED STATES) Jul 1999, 22 (7) p698-702, ISSN 0147-7447 Journal Code: 7806107

Publishing Model Print

Document type: Case Reports; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Successful total **knee arthroplasty** (TKA) relies on proper positioning of **prosthetic** components to restore the mechanical axis of the lower extremity. This report presents and analyzes a new noninvasive **method** using the Optotrack (Northern Digital Inc, Ontario, Canada) to accurately determine the center of the **femoral** head. This **method**, together with direct digitization of the bony landmarks of the **knee** and ankle intraoperatively, permits placement of the lower extremity in proper alignment intraoperatively. It also permits the surgeon to follow all the **angles** of movement or rotation and all displacements that occur at each step of the operative procedure. **knee** intraoperatively via a customized Windows-based program. In addition to presenting our first case, which, importantly, represents the first computer-assisted TKA in a patient, we report on the accuracy and reproducibility of the technique for locating the center of the **femoral** head obtained during an extensive series of cadaver studies. Location of the **femoral** head, a major aspect of effecting neutral mechanical axis alignment, appears to be possible to within 2-4 mm, which corresponds to an angular accuracy of better than 1 degree. This **method** requires no computed tomography scans or other preliminary marker placement. The only basic requirement other than the

instrumentation described is a freely mobile hip, which is generally present in TKA patients.

Record Date Created: 19990921

Record Date Completed: 19990921

Descriptors: *Arthroplasty, Replacement, Knee -- methods --MT; *Bone Malalignment--prevention and control--PC; *Therapy, Computer-Assisted--methods --MT

28/7,K/3

DIALOG(R)File 155:MEDLINE(R)

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13308526 PMID: 10084654

Relationship between magnitude of **resection**, complication, and **prosthetic** survival after **prosthetic knee** reconstructions for distal **femoral** tumors.

Kawai A; Lin P P; Boland P J; Athanasian E A; Healey J H

Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York, New York 10021, USA.

Journal of surgical oncology (UNITED STATES) Feb 1999, 70 (2)
p109-15, ISSN 0022-4790 Journal Code: 0222643

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

BACKGROUND AND OBJECTIVES: Limb-sparing surgery has become the preferred surgical treatment of malignant bone tumors. The objective of this study was to evaluate factors that influence the morbidity and outcome of **prosthetic knee replacement** after **resection** of malignant tumors of the distal **femur**. **METHODS:** Eighty-two patients who had a **resection** of malignant tumor of the distal **femur** and **implantation** of a segmental **knee prosthesis** (minimum follow-up, 2 years) were retrospectively reviewed. **RESULTS:** Twenty-nine patients (35%) underwent 32 **prosthetic** revisions, 6 from perioperative wound complications, 13 from aseptic loosening, and 13 from other complications. The 3-, 5-, and 10-year Kaplan-Meier **prosthetic** survival rates were 82%, 71%, and 50%, respectively. On univariate analysis, patients who had more than 40% **resection** of the distal **femur** ($P = 0.010$) and those who had all their vasti muscles **resected** ($P = 0.011$) had significantly worse **prosthetic** survivals than the others. On multivariate analysis, **resection** of more than 40% of the distal **femur** was a significant negative prognostic factor for **prosthetic** survival ($P = 0.017$). Aseptic loosening was the primary cause of late **prosthetic** failure. Differences in the magnitude of **resection** influenced **prosthetic** survivorship more than **prosthetic** design. **CONCLUSIONS:** In the distal **femoral** endoprosthetic replacement, higher short- and long-term complications were found after extensive **resections**. Aseptic loosening was the primary cause of **prosthetic** failure.

Record Date Created: 19990324

Record Date Completed: 19990324

Descriptors: *Arthroplasty; Replacement, Knee --adverse effects--AE; *Femoral Neoplasms--surgery--SU; *Knee Prosthesis; *Prosthesis Failure; *Reconstructive Surgical Procedures; Adolescent; Adult; Arthroplasty, Replacement, Knee --mortality--MO; Child; Chondrosarcoma--mortality--MO; Chondrosarcoma--surgery--SU; Femoral Neoplasms--mortality--MO; Humans;

Serial 10/616102

March 23, 2005

Middle Aged; Osteosarcoma--mortality--MO; Osteosarcoma--surgery--SU;
Postoperative Complications--epidemiology--EP; Reconstructive Surgical
Procedures-- methods --MT; Retrospective Studies; Survival Rate

28/7,K/4

DIALOG(R) File 155:MEDLINE(R)

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12899189 PMID: 10847521

Posterior cruciate ligament function following total **knee arthroplasty**:
the effect of joint line elevation.

Emodi G J; Callaghan J J; Pedersen D R; Brown T D

Iowa orthopaedic journal (UNITED STATES) 1999, 19 p82-92, ISSN
1541-5457 Journal Code: 8908272

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

One of the most commonly cited reasons for retaining the **posterior** cruciate ligament (PCL) during total **knee arthroplasty** is to preserve **femoral rollback** and theoretically improve extensor mechanism efficiency (lengthening the moment arm). This study was undertaken to assess PCL function in this regard and to delineate the effects of joint line elevation that can be manipulated intraoperatively by the surgeon. The anterior movement of tibiofemoral contact following PCL **resection** at flexion angles 60 degrees demonstrated the beneficial effect of the PCL on extensor function. This anterior translation and the concomitant increases in quadriceps tendon load and patellofemoral contact pressures were consistently observed. This study demonstrated that small changes of the joint line position significantly influenced PCL strain and **knee** kinematics. In order to preserve the desired functions that would be lost with an overly lax PCL and to avoid the potential adverse effects of an overly tight PCL (**posterior** edge loading and increased tibiofemoral contact), the surgeon should make every effort to restore the preoperative joint line. If this is not possible, consideration should be given to **posterior** cruciate recession or use of a **posterior** cruciate substituting design.

Record Date Created: 20000713

Record Date Completed: 20000713

Descriptors: ***Arthroplasty, Replacement, Knee** ; ***Knee Joint--physiology**
--PH; ***Posterior Cruciate Ligament--physiology--PH**; Adult; Aged;
Arthroplasty, Replacement, Knee -- methods --MT; Humans; Middle Aged;
Postoperative Period

28/7,K/6

DIALOG(R) File 155:MEDLINE(R)

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12628760 PMID: 10546608

Results of total **knee arthroplasty** with medial epicondylar osteotomy to
correct varus deformity.

Engh G A; Ammeen D

Anderson Orthopaedic Research Institute, Alexandria, VA 22306, USA.

Clinical orthopaedics and related research (UNITED STATES) Oct 1999,
(367) p141-8, ISSN 0009-921X Journal Code: 0075674
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM

Record type: MEDLINE; Completed

The clinical results of using medial epicondylar osteotomies to correct varus deformities in total knee arthroplasties were investigated. Unlike the traditional method of subperiosteal stripping of tibial ligaments, this alternative does not damage ligaments. Between 1991 and 1996, the senior author performed medial epicondylar osteotomies in 80 patients (93 knees) with primary total knee arthroplasty; of these, 60 patients (70 knees) were available for 2- to 4-year followup. At followup, no patients reported knee instability. Mean varus and valgus stability measured 14.2 points (Knee Society scale, 0-15 points). The Knee Society clinical score was 93 points, compared with a preoperative score of 42 points. The mean range of motion at followup was 111 degrees, compared with a preoperative mean of 101 degrees. The postoperative tibiofemoral angle on full limb radiographs taken with the patient weightbearing averaged 7 degrees valgus, compared with an average 6 degrees varus preoperative angle. Ninety-five percent of the patients were satisfied and reported less pain and improved knee function. Bone union occurred in 54% of the knees and fibrous union occurred in 46%. Focal tenderness, restricted motion, or other symptoms were not associated with fibrous union. The results show that epicondylar osteotomy for varus knee deformity provides excellent patient satisfaction, knee stability, motion, and deformity correction.

Record Date Created: 19991118

Record Date Completed: 19991118

Descriptors: *Arthroplasty, Replacement, Knee -- methods --MT; * Femur --surgery--SU; *Joint Deformities, Acquired--surgery--SU; *Knee Joint --surgery--SU; *Osteotomy

28/7,K/9

DIALOG(R) File 155:MEDLINE(R)

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12561768 PMID: 9880189

Current concepts review: symmetry versus asymmetry in the design of total knee femoral components--an unresolved controversy.

Bindelglass D F; Dorr L D

Orthopedic Specialty Group, Fairfield, Connecticut 06430, USA.

Journal of arthroplasty (UNITED STATES) Dec 1998, 13 (8) p939-44,
ISSN 0883-5403 Journal Code: 8703515

Publishing Model Print

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Despite the excellent success of earlier total knee replacement designs such as the Total Condylar Knee (Johnson & Johnson, Raynham, MA), which had a symmetrical femoral component, the majority of modern designs feature a more anatomic and asymmetric femoral prosthesis. A raised lateral phalange, an angled trochlear groove, or both are thought to improve patellar tracking. Laboratory studies, however, suggest that

surgical technique may be the dominant factor in determining patellofemoral kinematics. Component design has not been proven to be significant. A **prosthesis** with asymmetric **femoral** components may cost more. The literature reviewed in this article finds no advantage to the use of asymmetric versus symmetrical **femoral** components in total **knee replacement**. (35 Refs.)

Record Date Created: 19990311

Record Date Completed: 19990311

; **Arthroplasty, Replacement, Knee -- methods --MT; Femur ; Humans; Knee Joint; Patella; Prosthesis Design**

28/7,K/10

DIALOG(R) File 155:MEDLINE(R)

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12435071 PMID: 9747068

Intramedullary versus extramedullary tibial alignment guides in total **knee arthroplasty**.

Yang S H; Liu T K

Department of Orthopedic Surgery, National Taiwan University Hospital, Taipei, Taiwan.

Journal of the Formosan Medical Association = Taiwan yi zhi (TAIWAN)

Aug 1998, 97 (8) p564-8, ISSN 0929-6646 Journal Code: 9214933

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The intramedullary alignment guide is superior to the extramedullary guide for preparation of the **femur** in total **knee arthroplasty**. However, there is controversy over which guide is more appropriate for the tibial sector. We retrospectively compared the accuracy of the intramedullary and extramedullary guides for tibial cutting in patients undergoing total **knee arthroplasty**. Total **knee arthroplasty** was performed in 100 **knees** (68 patients) during a 2-year period. The intramedullary rod was used for preparation of the **femur** in all cases. For the tibia, each guide system was used in 50 **knees**. The intramedullary rod was not used in tibias with extreme deformity where the rod could not pass at least two-thirds of the way through the medullary canal. Standing anteroposterior radiographs of the hip to the ankle were taken before surgery and 2 to 6 months postoperatively. The **angle** formed by the intersection of the tibial mechanical axis and the undersurface of the tibial component (tibial component **angle**) was measured to check the accuracy of the tibial alignment system. We found no significant differences in the mechanical axis, tibiofemoral alignment, or the tibial component **angle** between the two groups. The proximal tibial cuts were within 2 degrees of the ideal (90 degrees) in 84% of **knees** treated with the intramedullary guide, and in 82% of those with the extramedullary guide ($p > 0.1$). These findings suggest that both guide systems can yield satisfactory alignment. If the tibia is not badly deformed, the intramedullary rod can produce tibial cuts as accurately as the extramedullary system.

Record Date Created: 19981008

Record Date Completed: 19981008

Descriptors: ***Arthroplasty, Replacement, Knee -- methods --MT**

28/7,K/11
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2005 The Dialog Corp. All rts. reserv.

12342844 PMID: 9655100

Interrelationships of clinical outcome, length of **resection**, and energy cost of walking after **prosthetic knee replacement** following **resection** of a malignant tumor of the distal aspect of the **femur**.

Kawai A; Backus S I; Otis J C; Healey J H

Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York City, NY 10021, USA.

Journal of bone and joint surgery. American volume (UNITED STATES) Jun 1998, 80 (6) p822-31, ISSN 0021-9355 Journal Code: 0014030

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The relationships between the functional score according to the system of the International Society of Limb Salvage, the extent of **resection**, energy cost of walking, and gait characteristics were studied in thirty-six patients who had had segmental **knee replacement** after **resection** of a malignant tumor of the distal aspect of the **femur**. The mean free-walking velocity was 62.3 meters per minute (79 per cent of normal), which was a result of decreases in both cadence and stride length. The mean net energy cost during walking was 35 per cent greater than that of normal controls and correlated with the percentage of the **femur** that had been **resected**. All patients had decreased single-limb support time on the affected side compared with the unaffected side. There was a weak correlation between the asymmetry of the single-limb support time and the percentage of the **femur** that had been **resected**. The mean extensor torque of the affected **knee** was 30 per cent that of the unaffected **knee** when one head of the quadriceps muscle had been **excised**, 19 per cent when two heads had been **excised**, 4 per cent when three heads had been **excised**, and 1 per cent when four heads had been **excised**. The patients who had had an extra-articular **resection** had lower mean extensor and flexor torques at the **knee** compared with those who had had an intra-articular **resection**. The asymmetry of the single-limb support time was inversely related to the residual extensor and flexor torques. The overall score according to the system of the International Society of Limb Salvage ranged from 17 to 29 points (mean, 24.6 points; 82 per cent of normal). The net energy cost, percentage of maximum aerobic capacity, and asymmetry of the single-limb support time had significant negative correlations with the overall functional score. Multivariate analysis showed that the overall functional score and the percentage of the **femur** that had been **resected** were the two most important factors that predicted the net energy cost. To our knowledge, this is the first objective validation of the functional score according to the system of the International Society of Limb Salvage. As the net energy cost can be predicted from universally available, inexpensive measures, investigators can easily use it as a clinical and research tool to evaluate **prosthetic** performance and to assess operative outcome.

Record Date Created: 19980716

Record Date Completed: 19980716

Descriptors: *Arthroplasty, Replacement, Knee ; *Energy Metabolism
--physiology--PH; * Femoral Neoplasms--physiopathology--PP; * Femoral

Neoplasms--surgery--SU; *Osteotomy-- methods --MT; *Severity of Illness Index; *Walking--physiology--PH; Adolescent; Adult; Aged; **Arthroplasty, Replacement, Knee** --rehabilitation--RH; Case-Control Studies; Disabled Persons--classification--CL; **Femoral** Neoplasms--metabolism--ME; **Femoral** Neoplasms--radiography--RA; Humans; Middle Aged; Multivariate Analysis; Predictive Value of Tests; Reproducibility of Results...

28/7,K/12

DIALOG(R) File 155:MEDLINE(R)

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12332727 PMID: 9645517

Complex primary and revision total **knee arthroplasty** using the **condylar** constrained **prosthesis**: an average 5-year follow-up.

Hartford J M; Goodman S B; Schurman D J; Knoblick G

Stanford University Medical Center, California 94305, USA.

Journal of **arthroplasty** (UNITED STATES) Jun 1998, 13 (4) p380-7,

ISSN 0883-5403 Journal Code: 8703515

Publishing Model Print

Document type: Case Reports; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The **condylar** constrained total **knee arthroplasty** was performed on 29 patients undergoing 33 procedures and were reviewed clinically and radiographically at an average follow-up of 5 years (range, 2-10 years). There were 21 women and 8 men. The average age at the time of surgery was 70 years (range, 32-84). Of the 16 **knees** that were revision total **knee** arthroplasties, 8 had a previous infected total **knee arthroplasty**, and 17 **knees** had severe deformities requiring the use of the **condylar** constrained **prosthesis**. The patients were rated according to the **Knee** Society clinical and radiological evaluation protocol. Measurements of **femoral** and tibial component position were obtained as well as **femoral** tibial **angle**, patella position, and cement bone radiolucencies. All clinical measurements were made by an independent physical therapist. Clinical results revealed an improvement from an average preoperative **knee** score of 38 points to an average **postoperative** score of 86 points. The clinical results for 19 (58%) **knees** were excellent, 8 (24%) had a good result, 1 (3%) was fair, 2 (6%) were poor, and 3 (9%) were failures. The patients' average functional levels increased from 24 to 58. The final average flexion was 96 degrees. Three **knees** have been revised (9%). One was revised for recurrent infection, one for **periprosthetic** fracture, and one for mechanical loosening of the tibial component. There were no other **knees** with evidence of radiologic loosening. We conclude that the **condylar** constrained total **knee prosthesis** provides an acceptable solution for revision and complex primary total **knee replacements** at an intermediate follow-up term of 5 years.

Record Date Created: 19980929

Record Date Completed: 19980929

Descriptors: ***Arthroplasty, Replacement, Knee** --instrumentation--IS; ***Knee Prosthesis**; Adult; Aged; Aged, 80 and over; **Arthroplasty, Replacement, Knee** -- methods --MT; Bone Cements; Disability Evaluation; **Femur**; Follow-Up Studies; Humans; **Knee Joint**--radiography--RA; Middle Aged; **Prosthesis** Design; **Prosthesis** Failure; **Tibia**...

28/7,K/13
DIALOG(R) File 155:MEDLINE(R)
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12310203 PMID: 9621901

Posterior tilting of the tibial component decreases **femoral rollback** in **posterior**-substituting **knee replacement**: a computer simulation study.

Piazza S J; Delp S L; Stulberg S D; Stern S H

Department of Mechanical Engineering, Northwestern University and Sensory Motor Performance Program, Rehabilitation Institute of Chicago, Illinois 60611, USA.

Journal of orthopaedic research - official publication of the Orthopaedic Research Society (UNITED STATES) Mar 1998, 16 (2) p264-70, ISSN 0736-0266 Journal Code: 8404726

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Posterior tilting of the tibial component is thought to increase the range of motion in **posterior** cruciate-retaining total **knee replacement**, but its effect on **implant** motion in **posterior** cruciate-substituting total **knee replacement** is unknown. This issue has become of interest recently because manufacturers have introduced instrumentation that produces a **posteriorly tilted tibial cut for both implant types**. The purpose of this study was to investigate how motion of **posterior** cruciate-substituting total **knee replacement** is affected when the tibial component is installed with **posterior tilt**. Sagittal plane **implant** motions were predicted from **prosthesis** geometry with use of a computer simulation in which the **femoral condyles** were assumed to sit in the bottoms of the tibial condylar wells when the **knee** was in extension. **Rollback of the femoral component** was produced by a **cam-spine mechanism** at higher angles of flexion. The simulations revealed that **even small degrees of posterior tilt reduced rollback by limiting the interaction between the cam and spine**. Tilting the component **posteriorly** by 5 degrees caused the cam to contact the spine at a **knee flexion angle** that was 18 degrees higher than with the untilted component. The results suggest that **posterior** tilting of the tibial component in **posterior** cruciate-substituting **knee replacement** may not produce the same beneficial effects that have been reported for the tilting of tibial components in **posterior** cruciate-retaining **knee replacement**.

Record Date Created: 19980618

Record Date Completed: 19980618

Descriptors: *Arthroplasty, Replacement, Knee -- methods --MT; *Computer Simulation; * Femur --physiology--PH; *Models, Biological; *Tibia --physiology--PH

File 155:MEDLINE(R) 1951-2005/Mar W3
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 (c) 2005 The HW Wilson Co.
 File 144:Pascal 1973-2005/Mar W2
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Set	Items	Description
S1	90688	KNEE() REPLACEMENT OR ARTHROPLASTY
S2	15458	ARTIFICIAL() KNEE? ? OR (KNEE OR FEMORAL) () (IMPLANT OR PROS- THES?S OR PROSTHETIC?)
S3	796361	DORSAL? OR POSTERIOR
S4	2503727	RESECT? OR EXCIS? OR REMOV? OR (CUT OR CUTS OR CUTTING) (2W- OUT
S5	386159	FEMUR OR FEMORAL OR CONDYL? OR EPICONDYL?
S6	1555024	PIN OR PINS OR PEG? ? OR PLUG? ? OR POST? ?
S7	440474	PROTRUSION? ? OR PROJECTION? ? OR TAB? ?
S8	165176	NAIL? ? OR SCREW? ? OR SPIGOT? ?
S9	200310	DRILL?
S10	54	S1 AND S5(S) S9 AND S6:S8
S11	307	S1 AND S3(S) S4(S) S5
S12	0	S10 AND S11
S13	780	S5 AND S6:S8 AND S9
S14	1514	S3(S) S4(S) S5
S15	5	S13 AND S14
S16	5	RD (unique items)
S17	76173	S1/TI,DE OR S2/TI,DE
S18	275	S14 AND S17
S19	45	S13 AND S17
S20	3226	S3(3N) S5
S21	292	S20(S) S4
S22	104	S1:S2 AND S21
S23	28	S22/2000:2002
S24	23	S22/2003:2005
S25	53	S22 NOT S23:S24
S26	22	RD (unique items)
S27	22	Sort S26/ALL/PY,A

Serial 10/616102

March 23, 2005

S28 1 S27 AND S6:S9
S29 1 S28 NOT S15
S30 21 S26 NOT (S15 OR S28)
S31 21 Sort S30/ALL/PY,A
S32 300 S18:S19 NOT (S15 OR S28 OR S26)
S33 159 RD (unique items)
S34 37 S33/2000:2002
S35 41 S33/2003:2005
S36 81 S33 NOT S34:S35
S37 63 S14 AND S36
S38 0 S19 AND S37
S39 63 S1:S2 AND S37
S40 63 S17 AND S37
S41 8 S3(5N)S4(5N)S5 AND S37
S42 39 (S3/TI,DE OR S4/TI,DE OR S5/TI,DE) AND S40
S43 32 S42 NOT S41
S44 32 Sort S43/ALL/PY,A

16/6/3 (Item 1 from file: 94)

04819375 JICST ACCESSION NUMBER: 01A0030161 FILE SEGMENT: JICST-E

The Effect of Graft-Tunnel Diameter Disparity on Healing of the Doubled
Flexor Tendon Graft within the Bone Tunnel in Anterior Cruciate
Ligament Reconstruction., 1999

16/6/4 (Item 2 from file: 94)

03478628 JICST ACCESSION NUMBER: 97A1009701 FILE SEGMENT: JICST-E

Initial Strength of the Femur -graft-tibia Complex after Posterior
Cruciate Ligament Reconstruction. Comparison among Three reconstruction
Procedures., 1997

29/7/1 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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08660834 PMID: 2664086

Autogenous bone grafting for severe angular deformity in total knee
arthroplasty .

Altchek D; Sculco T P; Rawlins B

Hospital for Special Surgery, New York, New York.

Journal of arthroplasty (UNITED STATES) 1989, 4 (2) p151-5, ISSN

0883-5403 Journal Code: 8703515

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Fourteen patients with severe angular knee deformities (range, 30 degrees varus to 35 degrees valgus) had total knee arthroplasty using autogenous bone graft to the tibia. Twelve knees had osteoarthritis, one rheumatoid arthritis, and one gouty arthritis. The preoperative knee motion averaged -5 degrees of extension to 80 degrees of flexion and the average motion arc was 70 degrees. All tibial defects were greater than 25% of the tibial component support surface and more than 10 mm deep. Twelve knees were reconstructed with Insall-Burstein posterior stabilized total condylar knee implants and two knees, with severe preoperative ligamentous instability,

with the constrained Total Condylar III implant. Postoperative rehabilitation was routine, and weight bearing was begun, on average, on the third postoperative day. The follow-up period averaged 4.1 years (range, 2-7.3 years). Radiographic analysis revealed no change in knee or component alignment compared with immediate postoperative position. All grafts consolidated without evidence of collapse, resorption, or prosthetic subsidence. All patients had good or excellent clinical results (Hospital for Special Surgery Knee Rating Scale). The average postoperative arc of motion was 90 degrees. There were no infections and no need for implant removal. The technique developed by the senior author (T.P.S.) utilizes bone resected from the distal femur during knee arthroplasty. An oblique planar cancellous surface is created on the recipient side, and coaptation of cancellous distal femoral graft surface to this recipient bed is ensured by vitallium screw fixation. The proximal tibia is reconstituted by the graft, and subchondral femoral bone after shaping of the graft forms the tibial periphery.

Record Date Created: 19890821

Record Date Completed: 19890821

31/6/3 (Item 3 from file: 155)
08797568 PMID: 2582671

Indications and results of intertrochanteric osteotomy in osteonecrosis of the femoral head.

Dec 1989

31/6/6 (Item 6 from file: 94)
02233435 JICST ACCESSION NUMBER: 94A0869196 FILE SEGMENT: JICST-E
3-D Motion analysis after TKA (especially about the Effect of PCL Resection)., 1994

31/6/13 (Item 13 from file: 73)
06933492 EMBASE No: 1997217991

Femoral component dislocation in unicondylar knee prothesis: A case report

DECHAUSSEMENT DE LA PIECE FEMORALE D'UNE PROTHESE UNICOMPARTIMENTAIRE DE GENOU. A PROPOS D'UN CAS
1997

31/6/14 (Item 14 from file: 155)
12151012 PMID: 9452813

[Dislocation of the femoral component of an unicondylar knee prosthesis. Apropos of a case]

Dechaussement de la piece femorale d'une prothese unicompartmentaire de genou. A propos d'un cas.
1997

31/6/15 (Item 15 from file: 155)
11984979 PMID: 9268798

Vastus-Psoas release for acetabular exposure in revision hip surgery.
Aug 1997

31/6/18 (Item 18 from file: 155)
12490365 PMID: 9802660

Patellofemoral complications in symmetrical total knee arthroplasty.
Oct 1998

31/6/19 (Item 19 from file: 155)
12367232 PMID: 9678043

Wear patterns on tibial plateaus from varus and valgus osteoarthritic knees.

Jul 1998

31/7/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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08747837 PMID: 3267676

An analysis of the survival rate of total-condylar total knee prostheses with posterior stability.

Aglietti P; Scrobe F; Gaudenzi A; Buzzi R; Allegra M

Ia Clinica Ortopedica dell'Universita, Firenze.

Italian journal of orthopaedics and traumatology (ITALY) Dec 1988, 14

(4) p419-28, ISSN 0390-5489 Journal Code: 7511480

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Survival rate tables are an adequate and relatively new means of evaluating prostheses of the knee. These tables may be used to make a clear distinction between success and failure. In a study of 160 prostheses followed-up over a period of 9 years, a Total-Condylar knee prosthesis with posterior stability has a 90% probability of surviving for the entire period, based on mechanical and radiological failures, and a 96% probability based on failures that required its removal. The probability of mechanical or radiological failure is 1% per annum.

Record Date Created: 19891103

Record Date Completed: 19891103

31/7/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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08243115 PMID: 3361317

Patellofemoral functional results and complications with the posterior stabilized total condylar knee prosthesis.

Aglietti P; Buzzi R; Gaudenzi A

First Orthopaedic Clinic, University of Florence, Italy.

Journal of arthroplasty (UNITED STATES) 1988, 3 (1) p17-25, ISSN

0883-5403 Journal Code: 8703515

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The authors reviewed 73 knee arthroplasties performed with the Posterior Stabilized Total Condylar prosthesis, with an average follow-up period of 5.5 years. The function of the patellofemoral articulation was specifically analyzed. Patients with documented or suspected tibiofemoral problems were

excluded. Using the Hospital for Special Surgery **knee** rating system, 48 **knees** (66%) had excellent, 20 had good (27%), and 5 (7%) had fair results. Patients with unilateral disease were able to negotiate stairs and transfer normally in 64% and 100% of the cases, respectively. The most frequent **patellofemoral** problem was impingement (21%), but reoperation was needed in only one patient. Stress fracture of the patella and subluxation were rare. A medial tilt of the patella on the axial view had no apparent ill effect. The patella was lowered 12 mm on average as a consequence of the standard bone **resection** sequence and insertion of the tibial component. The patella was significantly lower in patients with impingement than in normal joints. Routine complete **patellofemoral** resurfacing is advised in total **knee joint arthroplasty**. Complications are infrequent with appropriate **prosthetic** design and due technical care.

Record Date Created: 19880527

Record Date Completed: 19880527

31/7/4 (Item 4 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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08770163 PMID: 2805473

Mechanisms of failure of the **femoral** and tibial components in total **knee arthroplasty**.

Windsor R E; Scuderi G R; Moran M C; Insall J N
Hospital for Special Surgery, New York, NY 10021.
Clinical orthopaedics and related research (UNITED STATES) Nov 1989,
(248) p15-9; discussion 19-20, ISSN 0009-921X Journal Code: 0075674
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

From 1974 to 1986, 1430 cemented primary total **knee** arthroplasties were available for analysis. These included 224 total **condylar prostheses** with a polyethylene tibial component, 289 **posterior stabilized prostheses** with a polyethylene tibial component, and 917 **posterior stabilized prostheses** with a metal-backed tibial component. There were 12 failures in the total **condylar** series including three infections (one early and two late), five loose tibial components, two loose **femoral** and tibial components, and two unstable arthroplasties. The **posterior stabilized prosthesis** with the polyethylene tibia demonstrated six failures including two loose tibial components, two loose **femoral** components, and one supracondylar **femur** fracture. The **posterior stabilized prosthesis** with the metal-backed tibial component was associated with seven failures including six infections (three early and three late) and one **femoral** loosening. No metal-backed tibial components have been revised for loosening. The overall failure rate in this series was 1.7% for all **prostheses**. The incidence of tibial loosening was 0.53% with an average time to failure of 4.7 years. The incidence of **femoral** loosening was 0.35% with an average time to failure of 2.0 years. Tibial loosening was related to error in technique: **postoperative** varus **tibiofemoral** alignment, varus tibial component position, and excessive tibial **resection**. The overall infection rate was 0.63% for all total **knee** arthroplasties, and all were secondary to gram-positive organisms. Presently, the **posterior stabilized prosthesis** with a metal-backed tibia is the authors' **implant** of choice. Technical

error and infection are the major causes of failure.

Record Date Created: 19891206

Record Date Completed: 19891206

31/7/5 (Item 5 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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10107596 PMID: 8448937

The effects of axial rotational alignment of the **femoral** component on **knee stability** and patellar tracking in total **knee arthroplasty** demonstrated on autopsy specimens.

Anouchi Y S; Whiteside L A; Kaiser A D; Milliano M T

DePaul Biomechanical Research Lab, St. Louis, MO 63044.

Clinical orthopaedics and related research (UNITED STATES) Feb 1993,

(287) p170-7, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Four fresh-frozen anatomic **knee** specimens were tested for **knee stability**, patellar tracking, and patello**femoral** contact points with the **femoral** component positioned in 5 degrees internal, 5 degrees external, or neutral axial rotational alignment of the **femoral** component referenced on the **posterior femoral condyles**. The externally rotated specimens had varus-valgus **stability** of the **knee** that was closest to the normal control. The internally rotated specimens shifted into valgus alignment with flexion. Patellar tracking also was closest to normal in the externally rotated specimens. Patello**femoral** contact was more evenly distributed between the medial and lateral contact areas in the externally rotated specimens than in the internally rotated or in the neutral specimens. Internal rotation of the **femoral** component in the **knee** with perpendicular **resection** of the tibia causes undesirable changes in **knee stability**, patellar tracking, and patello**femoral** contact points. Neutral positioning produces similar but less negative effects on **knee stability** and patellar kinematics. External rotation improves both patellar tracking and **knee stability** characteristics.

Record Date Created: 19930409

Record Date Completed: 19930409

31/7/7 (Item 7 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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10663281 PMID: 8050232

Cruciate retained and **excised total knee arthroplasty**. A comparative study in patients with bilateral total **knee arthroplasty**.

Shoji H; Wolf A; Packard S; Yoshino S

Department of Orthopaedic Surgery, Loma Linda University, CA.

Clinical orthopaedics and related research (UNITED STATES) Aug 1994,

(305) p218-22, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Clinical Trial; Journal Article; Randomized Controlled

Trial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A comparative study of **posterior** cruciate ligament retention and **excision** was conducted in patients who underwent bilateral total **knee arthroplasty** using the total **condylar** modifier **prosthesis**. The **posterior** cruciate ligament was **excised** in one **knee** and was retained in the other **knee** in 28 patients. **Postoperative** results were assessed using the Hospital for Special Surgery **Knee** Evaluation Score. In addition, stair activity was tested to determine whether there was preferential dependence on one of the two **knees**. There was no significant difference between the **posterior** cruciate ligament retained or **excised** **knees** in terms of **postoperative** Hospital for Special Surgery **Knee** Evaluation Score. Patients who ascended and descended stairs with one leg at a time tended to prefer the **posterior** cruciate ligament retention side. Those who could use each leg in sequence to go up and down stairs, however, did not show preferential dependence on either **knee**.

Record Date Created: 19940908

Record Date Completed: 19940908

31/7/8 (Item 8 from file: 73)
DIALOG(R) File 73:EMBASE
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06176893 EMBASE No: 1995213005
Femoral component rotational alignment using the extramedullary tibial shaft axis: A technical note
Stiehl J.B.; Abbott B.
Midwest Orthopaedic Biomechanic Lab, Columbia Hospital, Milwaukee, WI
United States
Journal of Orthopaedic Rheumatology (J. ORTHOP. RHEUMATOL.) (United Kingdom) 1995, 8/2 (93-96)
CODEN: JORHE ISSN: 0951-9580
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

The transepicondylar axis has been shown to have a constant relationship to the **knee** flexion axis, the mechanical axis of the lower extremity, and the limb axis of the lower leg in both extension and flexion. Using this constant relationship, we have developed a technique which uses a long rod centring on the extramedullary tibial shaft axis to determine the exact position of the **posterior condylar resection** to create the flexion gap in total **knee arthroplasty** (TKA). This technique has been used in over 100 cases and two cases of bilateral TKA underwent computed tomographs to evaluate the accuracy of the technique. Compared with the contralateral **knee** which had a **resection** parallel to the **posterior condyles**, using the extramedullary alignment allowed the **posterior condyle resection** to parallel the transepicondylar axis.

31/7/9 (Item 9 from file: 144)
DIALOG(R) File 144:Pascal
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11584501 PMID: 8895618

Femoral rotational alignment using the tibial shaft axis in **total knee arthroplasty** .

Stiehl J B; Cherveney P M

Midwest Orthopedic Biomechanical Laboratory, Columbia Hospital, Milwaukee, WI, USA.

Clinical orthopaedics and related research (UNITED STATES) Oct 1996,
(331) p47-55, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The capability of determining **femoral** component rotation by using a **posterior femoral condyle resection** made perpendicular to the longitudinal tibial shaft axis in **posterior** cruciate retaining total **knee arthroplasty** was evaluated. From 100 consecutive cases, 54 used the **femoral posterior condyle** axis and 46 used an extramedullary alignment rod based on the tibial shaft axis. Seventy-two percent of total **knee** arthroplasties using the **posterior condyle** axis required lateral release versus 28% using the tibial shaft axis. Patellar fracture occurred in 7% using the **posterior condyle** axis versus none using the tibial shaft axis. Two patients had both techniques in opposite **knees**. Using computed tomography, the **posterior condyle** axis **method** gave a **posterior condyle** angle of 5 degrees and 4 degrees compared with the transepicondylar axis, whereas the tibial shaft axis technique measured 0 degrees and 1 degree. The **posterior condyle resection** using the tibial shaft axis restores the anatomic patellofemoral relationships, minimizing patellofemoral complications.

Record Date Created: 19961202

Record Date Completed: 19961202

31/7/16 (Item 16 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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11740066 PMID: 10677975

[Total **knee replacement** of severe flexion contracture deformities greater than 60 degree]

Lu S; Lin J; Kou B

Arthritis Clinical and Research Center, People's Hospital, Beijing Medical University.

Zhonghua wai ke za zhi Chinese journal of surgery (CHINA) Jul 1997, 35

(7) p414-7, ISSN 0529-5815 Journal Code: 0153611

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: CHINESE

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The technique of total **knee arthroplasty** for the patients with severe flexion contractures of more than 60 degrees is not clear. Recently, We have performed 37 total **knee** arthroplasties in 23 patients with flexion contracture of more than 60 degrees (average 77.97 degrees). Among them, 14

knees (37.9%) with flexion contracture of more than 90 degrees, and 7 **knees** (18.0%) with 90 degrees flexion fusion deformities. Significant improvements occurred after averaged 4.3-year follow-up. Complications occurred in four patients: three had transient peroneal-nerve palsy, and one had temporary circulatory disturbance of the lower extremity. They recovered after conservative therapy. We consider that severe flexion contracture of more than 60 degrees is not a contraindication of TKR. Staged bone **resection** and thoroughly soft-tissue release of the **posterior** capsule and collateral ligament balance were the critical procedure. If necessary, additional distal **femoral condyle resection** with **posterior** cruciate ligament sacrifice can be considered.

Record Date Created: 20000505

Record Date Completed: 20000505

31/7/17 (Item 17 from file: 94)
DIALOG(R)File 94:JICST-EPlus
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03596729 JICST ACCESSION NUMBER: 98A0504841 FILE SEGMENT: JICST-E
Open reduction of high **condylar** fractures with a vertical sub**condylotomy** technique and a new retractor for vertical sub**condylotomy**.
IIDA SEIJI (1); KOGO MIKIHICO (1); MATSUYA TOKUZO (1); SUGI MASAKAZU (1); NAKAHARA HIROKAZU (1); MIMA TAKASHI (2)
(1) Osaka Univ., Fac. of Dent.; (2) Osaka Teishin Byoin
Nippon Koku Geka Gakkai Zasshi (Japanese Journal of Oral and Maxillofacial Surgery), 1998, VOL.44, NO.4, PAGE.412-414, FIG.4, REF.1
JOURNAL NUMBER: G0132CAU ISSN NO: 0021-5163
UNIVERSAL DECIMAL CLASSIFICATION: 616.314-089
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: Open vertical osteotomy in the mandibular ramus is the one surgical option for the correction of mandible deformity. It is easy to assume that this procedure is useful for open reduction of **condylar** fractures. In this paper we describe a new systematic procedure for open reduction of high **condylar** fractures. The procedure involves vertical sub**condylotomy** and a new retractor for sub**condylotomy** to protect the mandibular neurovascular bundle. The major points of this operation are the use of vertical **condylotomy**, **removal** of the **posterior** border of the ramus and plating the **condylar** head with it, and accurate **replacement** of the **posterior** border of the ramus with mini plates prepared before osteotomy. (author abst.)

31/7/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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13324330 PMID: 10101323

The clinical significance of proximal tibial **resection** level in total **knee arthroplasty**.

Ritter M A; Montgomery T J; Zhou H; Keating M E; Faris P M; Meding J B
Kendrick Memorial Hospital, Center for Hip and **Knee** Surgery, Mooresville, IN 46158, USA.

Clinical orthopaedics and related research (UNITED STATES) Mar 1999,
(360) p174-81, ISSN 0009-921X Journal Code: 0075674
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Clinical and radiographic data were collected in 139 patients with 195 **posterior** cruciate retaining total condylar **knee prostheses** to evaluate the relationship of the proximal tibial **resection** level with long term results. Among the 139 patients were 75 patients with 106 total **knee replacements** observed for more than 8 years. All patients underwent biyearly routine examinations, including radiographs and clinical evaluations. The average medial tibial **resection** for the 139 patients with 195 total **knee replacements** was 2.95 mm, and in the subset of 75 patients (106 **knees**) observed for more than 8 years, it was 3.3 mm; both groups had a maximum of 14 mm. Sixty-three percent or 67 **knees** had medial **resection** levels of 3 mm or less. The average lateral tibial **resection** for the 195 **knees** was 5.48 mm and in the 106 **knees** was 5.71 mm, with a maximum of 22 mm. Fifty-one percent of 104 **knees** had lateral **resection** levels of 5 mm or less. Statistical analysis showed that there was no significant correlation between the level of proximal tibial **resection** and Knee Society **knee** score, range of motion, radiolucencies, or loosening or revision. These long term results suggest that minimal proximal tibial **resection** is not necessary for a successful **arthroplasty**, and problems associated with minimal **resection**, such as joint line elevation and thin polyethylene inserts, can be avoided.

Record Date Created: 19990415
Record Date Completed: 19990415

41/6/1 (Item 1 from file: 155)
12096202 PMID: 9394378

Preserving the **posterior** superior synovial recess during allograft TMJ diskal condylar transplantation in the adult goat.
Nov 1997

41/6/2 (Item 2 from file: 155)
12064574 PMID: 9381312

Anatomic study of **femoral** vein occlusion during simulated hip **arthroplasty**.
1997

41/6/4 (Item 1 from file: 5)
0007826134 BIOSIS NO.: 199192071905
REVISION **ARTHROPLASTY** FOR BROKEN **FEMORAL** STEM TECHNICAL CONSIDERATIONS
1991

41/6/7 (Item 3 from file: 73)
05911696 EMBASE No: 1994318632
Cruciate retained and **excised** total **knee arthroplasty**: A comparative study in patients with bilateral total **knee arthroplasty**
1994

41/7/3 (Item 3 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

DIALOG(R) File 73:EMBASE
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a duplicate of 31/7/16 page 23

06267644 EMBASE No: 1995303343
Flexion space configuration in total **knee arthroplasty**
Laskin R.S.
Hospital for Special Surgery, 535 East 70th Street, New York, NY 10021
United States
Journal of **Arthroplasty** (J. **ARTHROPLASTY**) (United States) 1995, 10/5
(657-660)
CODEN: JOARE ISSN: 0883-5403
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Equal **resection** of the **posterior femoral condyles** combined with a 90degree tibial **resection** results in a trapezoidal flexion space. Two groups of patients were studied; in one group, the flexion space was allowed to remain trapezoidal, whereas in the other group, the **anteroposterior femoral resections** were externally rotated to allow rectangularization of the flexion space. In the second group, the range of flexion was increased and the incidence of medial tibial pain and zone I radiolucencies decreased. Other than for **knees** in a hypervalgus position before surgery, the mean amount of rotation required was 3degree +/- 0.2degree.

41/7/8 (Item 1 from file: 34)
DIALOG(R) File 34:SciSearch(R) Cited Ref Sci
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duplicate of 31/7/9 p. 22-23

04177205 Genuine Article#: RL121 Number of References: 0
(NO REFS KEYED)
Title: **FEMORAL COMPONENT ROTATIONAL ALIGNMENT USING THE EXTRAMEDULLARY TIBIAL SHAFT AXIS - A TECHNICAL NOTE**
Author(s): STIEHL JB; ABBOTT B
Corporate Source: 2015 E NEWPORT/MILWAUKEE//WI/53211; COLUMBIA HOSP, MIDWEST ORTHOPAED BIOMECH LAB/MILWAUKEE//WI/00000
Journal: JOURNAL OF ORTHOPAEDIC RHEUMATOLOGY, 1995, V8, N2 (JUN), P93-96
ISSN: 0951-9580
Language: ENGLISH Document Type: ARTICLE

Abstract: The transepicondylar axis has been shown to have a constant relationship to the **knee** flexion axis, the mechanical axis of the lower extremity, and the limb axis of the lower leg in both extension and flexion. Using this constant relationship, we have developed a technique which uses a long rod centring on the extramedullary tibial shaft axis to determine the exact position of the **posterior condylar resection** to create the flexion gap in total **knee arthroplasty** (TKA). This technique has been used in over 100 cases and two cases of bilateral TKA underwent computed tomographs to evaluate the accuracy of the technique. Compared with the contralateral **knee** which had a **resection** parallel to the **posterior condyles**, using the extramedullary alignment allowed the **posterior condyle resection** to parallel the transepicondylar axis.

44/6/7 (Item 7 from file: 155)

08524428 PMID: 2924465

The patellar clunk syndrome. A complication of **posterior stabilized total knee arthroplasty**.
Apr 1989

44/6/9 (Item 9 from file: 155)

08851668 PMID: 2296439

High **condylar** shave of the temporomandibular joint with preservation of the articular soft tissue cover: an experimental study on rabbits.
Jan 1990

44/6/11 (Item 11 from file: 73)

05326964 EMBASE No: 1993095049

The effects of axial rotational alignment of the **femoral** component on **knee stability** and patellar tracking in total **knee arthroplasty** demonstrated on autopsy specimens
1993

44/6/12 (Item 12 from file: 155)

10122917 PMID: 8458139

Correction of ligament and bone defects in total **arthroplasty** of the severely valgus **knee**.
Mar 1993

44/6/13 (Item 13 from file: 155)

10916183 PMID: 7699369

Posterior cruciate function following total **knee arthroplasty**. A biomechanical study.
Dec 1994

44/6/15 (Item 15 from file: 155)

10513473 PMID: 8288658

Outcomes after displaced fractures of the **femoral** neck. A meta-analysis of one hundred and six published reports.
Jan 1994

44/6/16 (Item 16 from file: 73)

06267642 EMBASE No: 1995303341

Intercondylar distal **femoral** fracture: An unreported complication of **posterior -stabilized total knee arthroplasty**
1995

44/6/19 (Item 19 from file: 155)

11667038 PMID: 8981900

Dislocations and the **femoral** head size in primary total hip **arthroplasty**.
Dec 1996

44/6/20 (Item 20 from file: 155)

11636951 PMID: 8948243

Femoral cortical sleeve in revision **arthroplasty**. 24 patients followed 2-10 years.
Oct 1996

44/6/21 (Item 21 from file: 5)

0010679481 BIOSIS NO.: 199799313541

Femoral cortical sleeve in revision arthroplasty
1996

44/6/22 (Item 22 from file: 73)
07079192 EMBASE No: 1997361055

Current analysis of tibial coverage provided by total **knee arthroplasty**
systems
1997

44/6/23 (Item 23 from file: 73)
06791860 EMBASE No: 1997073362

Reconstruction of the mandibular **condyle** using transport distraction
osteogenesis
1997

44/6/24 (Item 24 from file: 94)
03402701 JICST ACCESSION NUMBER: 98A0016719 FILE SEGMENT: JICST-E
Long Term Follow-up Results of Total **Condylar Knee Arthroplasty** in
Osteoarthritis Patients., 1997

44/6/25 (Item 25 from file: 155)
12163516 PMID: 9467023

[Recommendations for standardized radiologic follow-up of thrust plate
endoprostheses]

Empfehlungen für die standardisierte radiologische Nachuntersuchung der
Druckscheibenendoprothese.
Nov 1997

44/6/26 (Item 26 from file: 73)
07247122 EMBASE No: 1998135989

Technical variations and long-term results of **resection arthroplasty**
for hallux valgus
1998

44/6/28 (Item 28 from file: 155)
12490366 PMID: 9802661

Early, incapacitating instability of **posterior cruciate**
ligament-retaining total **knee arthroplasty**.
Oct 1998

44/6/31 (Item 31 from file: 155)
13294218 PMID: 10065721

Relationship between wear debris particles and polyethylene surface
damage in primary total **knee arthroplasty**.
Feb 1999

44/7/1 (Item 1 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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06644586 PMID: 7183646

Girdlestone **arthroplasty**.

Sharma S; Gopalakrishnan L; Yadav S S

International surgery (UNITED STATES) Oct-Dec 1982, 67 (4 Suppl)
p547-50, ISSN 0020-8868 Journal Code: 0043524

Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

A series of 92 patient who underwent **excision arthroplasty** of the hip (Girdlestone **arthroplasty**) as a primary procedure is presented. The operation was performed for various conditions which included **femoral** neck fracture, rheumatoid arthritis, ankylosing spondylitis, tuberculosis, septic arthritis, unreduced **posterior** dislocation of long duration, fracture of the acetabulum, avascular necrosis of **femoral** head and bony ankylosis. **Excision** of head and neck of the **femur** was found to be an excellent salvage procedure for infected hips especially yielding uniformly satisfactory results at all ages irrespective of the disease. It provided a painless, mobile hip. Except for shortening and unstable gait, no other handicap was observed; the disadvantages of this handicap were outweighed by its advantages, compared with the disadvantages of other sophisticated hip operations such as **replacement**, and mould arthroplasties or even total hip **replacement**. Our results were excellent in 21% of cases, good in 44% and fair in 26% while they were poor in 9%. In view of its functional end results, we feel that this measure can be a good alternative to more modern and sophisticated hip operations in the form of partial or total hip **replacement** under Indian conditions.

Record Date Created: 19830817
Record Date Completed: 19830817

44/7/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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07835495 PMID: 3559575

Effects of total **knee replacement** design on **femoral** -tibial contact conditions.

Soudry M; Walker P S; Reilly D T; Kurosawa H; Sledge C B
Journal of **arthroplasty** (UNITED STATES) 1986, 1 (1) p35-45, ISSN
0883-5403 Journal Code: 8703515

Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Ten fresh **knee** specimens with **prosthetic** components inserted were tested in a loading rig. Compressive and shear force were applied to the **femur** with the tibia held fixed. The location of the **femoral** -tibial contact points was measured. The contact reaction forces, the shear forces, and the rocking moments transmitted to the tibial component were calculated. The variations in the test conditions were: high and low compressive force, flexion angles of 0 degree, 45 degrees, and 90 degrees, three curvatures of tibial plastic inserts, and the **posterior** cruciate retained or **resected**. When the **posterior** cruciate was retained, the contact points were close to the center of the component; for cruciate **resection**, the contacts were close to the anterior of the component. The shear forces and rocking moments were higher for cruciate **resection**, but the contact reaction forces were lower. There is a wide variety of **knee prosthesis** designs, but the amount of inherent **stability** between the **femoral** and tibial surfaces,

and whether the **posterior** cruciate ligament is retained or sacrificed, are two of the most important design variables. This study shows that cruciate **resection** increases the shear forces and the rocking moments to the tibial components and that additional fixation means may be necessary to compensate. On the other hand, cruciate retention with low conformity gives higher contact forces, which may lead to more wear in the long term. Cruciate sacrificing designs with **intercondylar** guiding surfaces are a separate category of design and were not considered in this study.

Record Date Created: 19870514

Record Date Completed: 19870514

44/7/3 (Item 3 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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07652191 PMID: 3746050

Stress analysis after total **knee arthroplasty** with **posterior** cruciate ligament- **resection** type and -retention type **prosthesis**--with special reference to the significance of retaining the **posterior** cruciate ligament.

Yasuda K; Sasaki T

Nippon Seikeigeka Gakkai zasshi (JAPAN) May 1986, 60 (5) p547-62,
ISSN 0021-5325 Journal Code: 0413716

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Stress analyses in **knees** replaced with PCL- **resection** type and PCL-retention type **prosthesis** under various loading conditions were performed by means of the three-dimensional finite element **method**. In the **knee** replaced with the PCL- **resection** type **prosthesis**, distribution of large transmitted loads was concentrated in a small area located in front of the stem and under the plateau of **prosthesis**. The sum of moments of transmitted loads increased as horizontal component loads on the **femoral** component increased. Large von Mises stresses were distributed in the anterior and proximal parts of the tibia. In the tibia replaced with the PCL-retention type, transmitted loads were observed in the whole area under the plateau and **posterior** cortex. The sum of moments was significantly smaller than that in the PCL- **resection** type. Large von Mises stresses were distributed in the **posterior** and proximal parts of the tibia. It was recommended that the PCL be saved in total **knee arthroplasty** whenever possible.

Record Date Created: 19861008

Record Date Completed: 19861008

44/7/4 (Item 4 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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07537664 PMID: 3698368

Twelve years' experience with **posterior** cruciate-retaining total **knee arthroplasty** .

Scott R D; Volatile T B

Clinical orthopaedics and related research (UNITED STATES) Apr 1986,
(205) p100-7, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The **posterior** cruciate ligament can be retained with advantage during routine total **knee arthroplasty**. This ligament is virtually always intact and functioning, even in rheumatoid patients. It is an important biologic stabilizer of the **knee**, capable of absorbing anterior-**posterior** shearing forces that otherwise must be borne by a constrained **prosthesis** and hence by the bone-cement interface. Its presence allows maintenance of the normal kinematics of the **knee**. Roll-back of the **femur** on the tibia can occur, enhancing flexion and improving the quadriceps moment. Substitution of the **posterior** cruciate ligament with the addition of **prosthetic** constraint will increase bone-cement reaction forces. These **prostheses** also require significant intercondylar **femoral** bone stock **resection**. The average range of motion of the early cruciate sacrificing design used in Insall's series was 94 degrees, 10 degrees or more less than now routinely seen with cruciate preservation. The bone-cement interface of the early total **condylar knee** with limited range of motion absorbed less force than it potentially might encounter with greater range of motion and increased function. Predictably, at long-term follow-up examination the newer cruciate-substituting **prostheses** that allow more physiologic range of motion might show higher radiolucent line rates and higher loosening rates than their cruciate-preserving counterparts. Only this information can settle the argument over whether the **posterior** cruciate ligament should be preserved, and if the objective is a **knee** with maximum flexion and maximum functional capability.

Record Date Created: 19860527

Record Date Completed: 19860527

44/7/5 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE
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03656237 EMBASE No: 1988105673

Patellofemoral functional results and complications with the **posterior** stabilized total **condylar knee prosthesis**

Aglietti P.; Buzzi R.; Gaudenzi A.

First Orthopaedic Clinic, University of Florence, Florence Italy

Journal of **Arthroplasty** (J. **ARTHROPLASTY**) (United States) 1988, 3/1
(17-25)

CODEN: JOARE ISSN: 0883-5403

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

The authors reviewed 73 **knee arthroplasties** performed with the **Posterior Stabilized Total Condylar prosthesis**, with an average follow-up period of 5.5 years. The function of the patellofemoral articulation was specifically analyzed. Patients with documented or suspected tibiofemoral problems were excluded. Using the Hospital for Special Surgery **knee** rating system, 48 **knees** (66%) had excellent, 20 had good (27%), and 5 (7%) had fair results. Patients with unilateral disease were able to negotiate

stairs and transfer normally in 64% and 100% of the cases, respectively. The most frequent patellofemoral problem was impingement (21%), but reoperation was needed in only one patient. Stress fracture of the patella and subluxation were rare. A medial tilt of the patella on the axial view had no apparent ill effect. The patella was lowered 12 mm on average as a consequence of the standard bone resection sequence and insertion of the tibial component. The patella was significantly lower in patients with impingement than in normal joints. Routine complete patellofemoral resurfacing is advised in total knee joint arthroplasty. Complications are infrequent with appropriate prosthetic design and due technical care.

44/7/6 (Item 6 from file: 73)
DIALOG(R) File 73:EMBASE
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04322578 EMBASE No: 1990205134
Mechanisms of failure of the femoral and tibial components in total knee arthroplasty
Windsor R.E.; Scuderi G.R.; Moran M.C.; Insall J.N.
Hospital for Special Surgery, 535 E. 70th St., New York, NY 10021 United States
Clinical Orthopaedics and Related Research (CLIN. ORTHOP. RELAT. RES.)
(United States) 1989, -/248 (15-20)
CODEN: CORTB ISSN: 0009-921X
DOCUMENT TYPE: Journal; Conference Paper
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

From 1974 to 1986, 1430 cemented primary total knee arthroplasties were available for analysis. These included 224 total condylar prostheses with a polyethylene tibial component, 289 posterior stabilized prostheses with a polyethylene tibial component, and 917 posterior stabilized prostheses with a metal-backed tibial component. There were 12 failures in the total condylar series including three infections (one early and two late), five loose tibial components, and two unstable arthroplasties. The posterior stabilized prosthesis with the polyethylene tibia demonstrated six failures including two loose tibial components, two loose femoral components, and one supracondylar femur fracture. The posterior stabilized prosthesis with the metal-backed tibial component was associated with seven failures including six infections (three early and three late) and one femoral loosening. no metal-backed tibial components have been revised for loosening. The overall failure rate in this series was 1.7% for all prostheses. The incidence of tibial loosening was 0.53% with an average time to failure of 4.7 years. The incidence of femoral loosening was 0.35% with an average time to failure of 2.0 years. Tibial loosening was related to error in technique: postoperative varus tibiofemoral alignment, varus tibial component position, and excessive tibial resection. The overall infection rate was 0.63% for all total knee arthroplasties, and all were secondary to gram-positive organisms. Presently, the posterior stabilized prosthesis with a metal-backed tibia is the authors' implant of choice. Technical error and infection are the major causes of failure.

44/7/8 (Item 8 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
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were studied using fluoroscopic-centered views. Excellent or good clinical results were obtained in 95% of the cases, and the average **knee** score improved from 22.5 to 90 points. No cases of radiologic loosening were observed. Incomplete radiolucent lines around the tibial component were detected in only 17% and were nonprogressive. Two patients developed hematogenous late deep infection, which required **removal** of the **prosthesis** in both, followed, at a second stage, by arthrodesis in one and **prosthesis** reimplantation in the other. Three **knees** (7%) had a painful impingement of the patella. Two of these were successfully reoperated with arthroscopic debridement of the peripatellar synovial tissues. Survivorship analysis, based on endpoints such as **prosthesis removal** for any cause or radiologic loosening (complete radiolucent line thicker than 1 mm, tilt, or subsidence of the component), showed a cumulative success rate of 96.2% at 13 years.

44/7/18 (Item 18 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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11222315 PMID: 9273376

Intercondylar distal **femoral** fracture. An unreported complication of **posterior -stabilized total knee arthroplasty**.

Lombardi A V; Mallory T H; Waterman R A; Eberle R W

Ohio Orthopaedic Institute, Ohio State University, Columbus, USA.

Journal of **arthroplasty** (UNITED STATES) Oct 1995, 10 (5) p643-50,
ISSN 0883-5403 Journal Code: 8703515

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Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

In an attempt to study the incidence of intraoperative **femoral** intercondylar fractures, two large series of **posterior -stabilized total knee arthroplasty** (TKA) systems were reviewed. Eight hundred ninety-eight nonconsecutive primary **posterior -stabilized** TKAs were compared with a second nonconsecutive series of 532 **posterior -stabilized** TKAs. Unique to the secondary TKA system is an intercondylar sizing guide to aid in verification of the intercondylar **resection** size. In the initial series, 40 distal **femoral** intercondylar fractures were noted (rate = 1:22; nondisplaced, 35; displaced, 5). In the secondary series, one displaced distal **femoral** intercondylar fracture occurred (rate = 1:532). The difference in the rate of fracture between the two populations was statistically significant ($P < .001$). Intraoperative distal **femoral** intercondylar fracture represents a potential complication of TKA and can be avoided with careful **resection** technique and size verification. No change in the **postoperative** rehabilitation program is required, however, for those patients identified with nondisplaced and intraoperative-stabilized displaced distal **femoral** intercondylar fractures.

Record Date Created: 19970822

Record Date Completed: 19970822

44/7/27 (Item 27 from file: 94)
DIALOG(R) File 94:JICST-EPlus

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05091933 JICST ACCESSION NUMBER: 01A0643940 FILE SEGMENT: JICST-E
Posterior Cruciate Ligament Function following Total **Knee Arthroplasty** :
The effect of tibial **posterior** tilt.
TAKATSU TOSHIRO (1); SHIMIZU KATSUTOKI (1); ITOKAZU KAZUMASA (1)
(1) Gifudai Seikeigeka
Nippon Rinsho Baiomekanikusu Gakkaishi (Proceedings of Annual Meeting of
Japanese Society for Orthopaedic Biomechanics), 1998, VOL.19,
PAGE.411-414, FIG.6, REF.4
JOURNAL NUMBER: X0647ABF ISSN NO: 1340-9018
UNIVERSAL DECIMAL CLASSIFICATION: 616/618-76/78 616.7-089
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Conference Proceeding
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication

ABSTRACT: The purpose of this study was assessment of **Posterior** Cruciate Ligament(PCL) function and **posterior** tilt of tibia which was used for increasing range of motion following total **knee arthroplasty**(TKA) with PCL retaining design. Ten fresh-frozen normal cadaveric lower extremity specimens (average age, 75.6 years; range, 70-88 years) were obtained for this study. The test was performed on loading frame after specimen preparation. The calcaneal bone was fixed on the frame. The load was applied perpendicularly by the moving frame (9.5kg) to **femoral** head through 4 casters. PCL strain and Roll-Back were measured before and following TKA by changing **posterior** tilt of tibial component and external rotation of **femoral** component. PCL strain at 105 degrees flexion in 0 degree **posterior** tilt group was decreased in 10 degrees **posterior** tilt group with statistically significance ($p < 0.05$). Movements of contact points were changed as Anterior Cruciate Ligament(ACL) **resected** group, 0 degree **posterior** tilt group. **Posterior** tilt of tibial component had a tendency to decrease efficiency of PCL. Retaining PCL is not same meaning to preserve PCL function because of lack of ACL and difference of articular geometry. (author abst.)

44/7/29 (Item 29 from file: 73)
DIALOG(R) File 73:EMBASE
(c) 2005 Elsevier Science B.V. All rts. reserv.

07630763 EMBASE No: 1999108211
The clinical significance of proximal tibial **resection** level in total **knee arthroplasty**
Ritter M.A.; Montgomery T.J.; Zhou H.; Keating M.E.; Faris P.M.; Meding J.B.
Dr. M.A. Ritter, Center for Hip and **Knee** Surgery, 1199 Hadley Road,
Mooresville, IN 46158 United States
Clinical Orthopaedics and Related Research (CLIN. ORTHOP. RELAT. RES.)
(United States) 1999, -/360 (174-181)
CODEN: CORTB ISSN: 0009-921X
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 18

Clinical and radiographic data were collected in 139 patients with 195

posterior cruciate retaining total **condylar knee prostheses** to evaluate the relationship of the proximal tibial **resection** level with long term results. Among the 139 patients were 75 patients with 106 total **knee replacements** observed for more than 8 years. All patients underwent biyearly routine examinations, including radiographs and clinical evaluations. The average medial tibial **resection** for the 139 patients with 195 total **knee replacements** was 2.95 mm, and in the subset of 75 patients (106 **knees**) observed for more than 8 years, it was 3.3 mm; both groups had a maximum of 14 mm. Sixty-three percent or 67 **knees** had medial **resection** levels of 3 mm or less. The average lateral tibial **resection** for the 195 **knees** was 5.48 mm and in the 106 **knees** was 5.71 mm, with a maximum of 22 mm. Fifty-one percent of 104 **knees** had lateral **resection** levels of 5 mm or less. Statistical analysis showed that there was no significant correlation between the level of proximal tibial **resection** and **Knee Society knee** score, range of motion, radiolucencies, or loosening or revision. These long term results suggest that minimal proximal tibial **resection** is not necessary for a successful **arthroplasty**, and problems associated with minimal **resection**, such as joint line elevation and thin polyethylene inserts, can be avoided.

44/7/30 (Item 30 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2005 The Dialog Corp. All rts. reserv.

13324338 PMID: 10101331

Posterior cruciate ligament effects on the flexion space in total **knee arthroplasty**.

Mihalko W M; Krackow K A

Department of Orthopaedic Surgery, State University of New York at Buffalo, USA.

Clinical orthopaedics and related research (UNITED STATES) Mar 1999,

(360) p243-50, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Twelve fresh frozen anatomic specimen **knees** were used in this study to measure changes in the tibiofemoral joint gaps after sacrificing the **posterior** cruciate ligament. Joint gap changes were measured using a motion tracking device in full extension and at 45 degrees and 90 degrees flexion. Tibiofemoral gaps were measured with no external compressive loads and under tension to define the flexion gap, the space available to be filled by components. After initial anterior cruciate ligament **removal**, meniscectomy, and a 1-cm tibial plateau cut, sacrifice of the **posterior** cruciate ligament caused significant differences in the flexion gap. At 90 degrees flexion the tibia distracted from the **femur** 5.26 +/- 1.9 mm (range, 3.2-9.1 mm) at rest and 6.4 +/- 2.5 mm under tension. No differences in the joint space were calculated in full extension under either loading case. The authors conclude that a major result of **posterior** cruciate ligament sacrifice is the creation of a larger flexion gap. This result provides insight into relative joint line changes that can occur after **posterior** cruciate ligament sacrifice. It also suggests the need for greater attention to flexion stability when sacrificing the **posterior** cruciate ligament and rethinking the role of **posterior** cruciate ligament

release in the management of pure, primary flexion contracture.

Record Date Created: 19990415

Record Date Completed: 19990415

44/7/32 (Item 32 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2005 The Dialog Corp. All rts. reserv.

12899189 PMID: 10847521

Posterior cruciate ligament function following total **knee arthroplasty**
: the effect of joint line elevation.

Emodi G J; Callaghan J J; Pedersen D R; Brown T D

Iowa orthopaedic journal (UNITED STATES) 1999, 19 p82-92, ISSN
1541-5457 Journal Code: 8908272

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

One of the most commonly cited reasons for retaining the **posterior** cruciate ligament (PCL) during total **knee arthroplasty** is to preserve **femoral** rollback and theoretically improve extensor mechanism efficiency (lengthening the moment arm). This study was undertaken to assess PCL function in this regard and to delineate the effects of joint line elevation that can be manipulated intraoperatively by the surgeon. The anterior movement of tibio**femoral** contact following PCL **resection** at flexion angles 60 degrees demonstrated the beneficial effect of the PCL on extensor function. This anterior translation and the concomitant increases in quadriceps tendon load and patello**femoral** contact pressures were consistently observed. This study demonstrated that small changes of the joint line position significantly influenced PCL strain and **knee** kinematics. In order to preserve the desired functions that would be lost with an overly lax PCL and to avoid the potential adverse effects of an overly tight PCL (**posterior** edge loading and increased tibio**femoral** contact), the surgeon should make every effort to restore the preoperative joint line. If this is not possible, consideration should be given to **posterior** cruciate recession or use of a **posterior** cruciate substituting design.

Record Date Created: 20000713

Record Date Completed: 20000713

File 149:TGG Health&Wellness DB(SM) 1976-2005/Mar W1
(c) 2005 The Gale Group
File 16:Gale Group PROMT(R) 1990-2005/Mar 23
(c) 2005 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2005/Mar 23
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File 441:ESPICOM Pharm&Med DEVICE NEWS 2005/Feb W2
(c) 2005 ESPICOM Bus.Intell.
File 98:General Sci Abs/Full-Text 1984-2004/Dec
(c) 2005 The HW Wilson Co.
File 369:New Scientist 1994-2005/Mar W1
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File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
File 636:Gale Group Newsletter DB(TM) 1987-2005/Mar 23
(c) 2005 The Gale Group
File 9:Business & Industry(R) Jul/1994-2005/Mar 22
(c) 2005 The Gale Group

Set	Items	Description
S1	3485	KNEE()REPLACEMENT OR ARTHROPLASTY
S2	1005	ARTIFICIAL()KNEE? ? OR (KNEE OR FEMORAL) () (IMPLANT OR PROS- THES?S OR PROSTHETIC?)
S3	21864	DORSAL? OR POSTERIOR
S4	1022232	RESECT? OR EXCIS? OR REMOV? OR (CUT OR CUTS OR CUTTING) (2W-)OUT
S5	11493	FEMUR OR FEMORAL OR CONDYL? OR EPICONDYL?
S6	1690124	PIN OR PINS OR PEG? ? OR PLUG? ? OR POST? ?
S7	471635	PROTRUSION? ? OR PROJECTION? ? OR TAB? ?
S8	148070	NAIL? ? OR SCREW? ? OR SPIGOT? ?
S9	402171	DRILL?
S10	158	S4(3N)S5
S11	129	S3(3N)S5
S12	158	S10(S)S10
S13	0	S10(S)S11
S14	71	S3(S)S4(S)S5
S15	4	S1:S2(S)S14
S16	3	RD (unique items) [too recent]
S17	1	((S1/TI,DE OR S2/TI,DE) AND S14) NOT S15 [not relevant]
S18	2	(S1:S2 AND S14) NOT (S15 OR S17)
S19	25	S9(S) (FEMUR OR FEMORAL) (S)S6:S8
S20	4	S1:S2 AND S19
S21	1	S20 NOT (S15 OR S17 OR S18)

18/3,K/2 (Item 2 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)
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01784667 SUPPLIER NUMBER: 20972828 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Musculoskeletal transplant.(Orthopaedic Issues in Critical Care)
Dougherty, Catherine
Critical Care Nursing Quarterly, v21, n2, p55(9)
August,
1998
PUBLICATION FORMAT: Magazine/Journal ISSN: 0887-9303 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional
WORD COUNT: 4073 LINE COUNT: 00410

... is a **femoral** head that might be **removed** in the process of primary total hip **arthroplasty** and replaced with a **prosthesis**. Surgical bone banks were **established** in many hospitals to meet...as well as whether organ donation is an option, the following tissues may be surgically **removed** bilaterally whole humerus, radius and ulna, every other rib, vertebral bodies, hemipelvis, **femur** , tibia-fibula, calcaneus, talus, fascia lata, patella tendon, Achilles tendon, semitendinosis, **posterior** tibialis, gracilis and pericardium. Consented musculoskeletal tissue is recovered using standard operating room instruments and...

...may be recovered with attachments to facilitate transplantation, as in the case of a whole **femur** where the iliopsoas tendinous insertion, as well as those for the gluteus medius, gluteus minimus...has now extended into the realm of other orthopaedic specialties to include major joint revision **arthroplasty** , spinal fusion, traumatic bone loss, and routine bone grafting of benign bone lesions.

Identification of...

File 350:Derwent WPIX 1963-2005/UD,UM &UP=200519

(c) 2005 Thomson Derwent

File 347:JAPIO Nov 1976-2004/Nov(Updated 050309)

(c) 2005 JPO & JAPIO

Set	Items	Description
S1	578	KNEE()REPLACEMENT OR ARTHROPLASTY
S2	1304	ARTIFICIAL()KNEE? ? OR (KNEE OR FEMORAL) () (IMPLANT OR PROS- THES?S OR PROSTHETIC?)
S3	9437	DORSAL? OR POSTERIOR
S4	1589245	RESECT? OR EXCIS? OR REMOV? OR (CUT OR CUTS OR CUTTING) (2W-)OUT
S5	7987	FEMUR OR FEMORAL OR CONDYL? OR EPICONDYL?
S6	739858	PIN OR PINS OR PEG? ? OR PLUG? ? OR POST? ?
S7	538698	PROTRUSION? ? OR PROJECTION? ? OR TAB? ?
S8	448361	NAIL? ? OR SCREW? ? OR SPIGOT? ?
S9	142939	DRILL?
S10	1529	IC=A61F-002/38
S11	84	S3(S)S4(S)S5
S12	31	S1:S2 AND S11
S13	9	S10 AND S12
S14	2	S6:S9 AND S13
S15	7	S13 NOT S14
S16	4472178	METHOD?
S17	2	S15 AND S16
S18	22	S12 NOT S13
S19	9	S6:S9 AND S18
S20	0	S16 AND S19
S21	13	S18 NOT S19
S22	607	S1:S2 AND S10
S23	36	S22 AND S3 AND S4 AND S5
S24	1	S23 AND S6:S8 AND S9
S25	1	S24 NOT (S13 OR S17 OR S18)
S26	26	S23 NOT (S13 OR S17 OR S18 OR S24)
S27	13	S1 AND S11
S28	0	S27 NOT (S13 OR S17 OR S18 OR S23 OR S24)

14/26, TI/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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010904532

WPI Acc No: 1996-401483/199640

Retrofit **posterior** stabilising housing **implant** for **replacement knee prosthesis** - has **posterior** stabilising housing dimensioned to pass through notch in existing **implant** and seat superiorly to trochlear opening of notch

14/26, TI/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009071973

WPI Acc No: 1992-199381/199224

Knee prosthesis - has **femoral** component for attachment to lower end of **femur** and interengageable tibial component for attachment to upper end of **tibia**

15/26, TI/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

015217159

WPI Acc No: 2003-278072/200327

Femoral implant for use in patello-femoral joint **arthroplasty** ,
includes **posterior** surface having maximum slope in medial lateral
cross-section of less than about 42 degrees

15/26, TI/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

012077708

WPI Acc No: 1998-494619/199842

Knee prosthesis for providing primary or supplementary **posterior**
stabilisation - includes a hinge that defines **posterior stabilisation**
separate from that defined by the **condyles**

15/26, TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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010073147

WPI Acc No: 1994-340860/199442

Total **knee prosthesis** with resurfacing - has mechanism integrated
with medial and lateral distal **condyles** of **femoral** component

15/26, TI/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008425161

WPI Acc No: 1990-312162/199041

Partially **stabilised knee prosthesis** - includes **femoral** component
having spaced **condylar** bearing portions, anterior and **posterior** inter
condylar portions and inter **condylar** opening

15/26, TI/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008187773

WPI Acc No: 1990-074774/199010

Partially **stabilised knee prosthesis** - has **femoral** and tibial
components with **condylar** bearing portions and bearing surfaces supporting
condylar portions

19/26, TI/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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012578501

WPI Acc No: 1999-384608/199932

Cutting guide for saw blade used to cut a distal **femur** to receive a
femoral implant

21/26, TI/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013269371

WPI Acc No: 2000-441277/200038

Reconstruction system for **knee** joint, has patella reaming apparatus with clamp for securing patella to be fitted with patella insert, and with reamer used to ream away sufficient amount of patella

21/26, TI/6 (Item 6 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012482029

WPI Acc No: 1999-288137/199924

Apparatus for locating bone **cuts** on medial and lateral **femoral condyles**

21/26, TI/8 (Item 8 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011456890

WPI Acc No: 1997-434797/199740

Distal **femoral cutting** guide instrument used in **knee replacement** - has intramedullary rod adapted to be inserted into patients canal using **posterior** paddles to engage **condyles** of patients **femur**

21/26, TI/10 (Item 10 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011042361

WPI Acc No: 1997-020285/199702

Surgical guide for **resection** of **femoral neck** during hip **arthroplasty** - has clamp on proximal end of frame for securing **resection** guide in fixed position relative to surgical reamer so that its longitudinal axis is parallel to longitudinal frame axis

21/26, TI/11 (Item 11 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

010292618

WPI Acc No: 1995-193877/199525

Distal **femoral cutting** instrument - comprises valgus block with flat reference surface mounting to intramedullary rod at bore of block

21/26, TI/12 (Item 12 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

008828370

WPI Acc No: 1991-332386/199145

Femoral prosthesis holder-driver tool - has handle with proximal end adaptor contact with **prosthesis** and distal end with anvil for driving **prosthesis** onto distal aspect of **femur**

25/26/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

009098497 **Image available**

WPI Acc No: 1992-225930/199227

Instrumentation for uni-compartmental total **knee arthroplasty** - has caliper measuring device to locate **cutting** guide before horizontal tibial **cut** is made, and includes **femoral cutting** block

26/26/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016706480 **Image available**
WPI Acc No: 2005-030756/200503

Internal brace for distraction **arthroplasty** has **condylar protrusion** undersurface which changes upper surface of tibial tray so that **protrusion** and tray may be positioned in joint between **femur** and tibia so as to distract joint

26/26/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016241880 **Image available**
WPI Acc No: 2004-399773/200437

Modular **knee prosthesis** for replacing patient's natural **knee**, has medial distal **posterior femoral** component, lateral distal **posterior femoral** component, and patellar **femoral** component interchangeable and connected with each other

26/26/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
015840412 **Image available**
WPI Acc No: 2003-902616/200382

End use **femoral** component for **femoral knee prosthesis** system, includes second portion which comprises second section of articulating surface and is selectively mated with first portion which comprises first section of articulating surface

26/26/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
015493350 **Image available**
WPI Acc No: 2003-555497/200352

Implantable knee prosthesis for unicompartamental **implantation** into **knee** joint comprises body, peripheral edge, first dimension defined by first and second ends, and second dimension defined by first and second sides

26/26/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
015478554 **Image available**
WPI Acc No: 2003-540701/200351

Implantable knee prosthesis includes body having elliptical shape in plan and pair of opposed faces, and peripheral edge of variable thickness extending between faces

26/26/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
015150208 **Image available**
WPI Acc No: 2003-210735/200320

Prosthetic patellar component has **femoral** engaging surfaces separated by a convex peak, with first edge surface defined by medial-laterally

extending surfaces

26/26/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
015150207 **Image available**
WPI Acc No: 2003-210734/200320
Femoral implant device for patello- femoral joint arthroplasty has channel between medial and lateral bearing surfaces extending transverse to medial-lateral direction

26/26/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
014978415 **Image available**
WPI Acc No: 2003-038929/200303
Prosthetic knee component for attaching to patient's knee surface, comprises first portion for attaching to knee surface and elongated, spheroidal extendable second portion disposed opposite to first portion

26/26/10 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
014671049 **Image available**
WPI Acc No: 2002-491753/200253
Tibia part, used during knee joint endoprosthesis, has plastic support containing slide-ways for slide skids of femur part, base part containing pin, adjustment mechanism of threaded hole and bolt

26/26/11 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
013846607 **Image available**
WPI Acc No: 2001-330820/200135
Unicompartmental knee prosthesis for replacing only one side of knee joint comprises femoral , meniscal, and tibial components

26/26/12 (Item 12 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
013596710 **Image available**
WPI Acc No: 2001-080917/200109
Provisional total knee prosthesis is made from folded and curved metal rods reproducing basic shape of permanent prosthesis

26/26/14 (Item 14 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
012564888 **Image available**
WPI Acc No: 1999-370994/199931
System for reconstructing natural torque between natural knee and area of natural hip

26/26/15 (Item 15 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

010867812 **Image available**

WPI Acc No: 1996-364763/199637

Femoral wedge set for three-section **knee prosthesis** - comprises separate **posterior** and distal wedges of different thicknesses, fitted in place by matching **projections** and recesses

26/26/16 (Item 16 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

010742283 **Image available**

WPI Acc No: 1996-239238/199624

Knee prosthesis with shims to accommodate loss of bone - has **femoral** component with internal box geometry with four intersecting planes, and shims of varying thickness which may be added to preserve geometry

26/26/17 (Item 17 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

010644627 **Image available**

WPI Acc No: 1996-141581/199615

Knee prosthesis components - has tibial and meniscal components each of one-piece bi-compartmental construction having pair of mutually spaced portions defining **condylar** articulation surfaces

26/26/20 (Item 20 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

010515173 **Image available**

WPI Acc No: 1996-012124/199602

Trochlean implant for **knee prosthesis** - has basic L-shape with two branches meeting at obtuse angle, and is made with lengthwise rib on **posterior** surface

26/26/21 (Item 21 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

010305497 **Image available**

WPI Acc No: 1995-206757/199527

Complete **knee prosthesis** - comprising **femoral** section with two **condyles** and incorporating plate with third **condyle** fitting into recess in tibial plate

26/26/22 (Item 22 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

010099474 **Image available**

WPI Acc No: 1995-000727/199501

Tibial component of **knee prosthesis** for arthritic joints - has metal platform secured to **resected** tibia and plastics bearing component sliding in anterior- **posterior** direction on it

26/26/23 (Item 23 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

009666082 **Image available**

WPI Acc No: 1993-359633/199345

Combination **knee prosthesis femoral** provisional device and
resection guide - includes provisional **femoral** component having
femoral joint surface and **cutting** guide member

26/26/24 (Item 24 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
009541412 **Image available**
WPI Acc No: 1993-234955/199329
Femoral prosthesis component for **knee replacement** surgery - has
set of **implants**, with distal **condylar** joint surface units which forms
anterior and **posterior** box

26/26/25 (Item 25 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
009342116
WPI Acc No: 1993-035579/199304
Modular shaping and trial reduction guide - comprises pair of tracks for
guiding tool along predetermined path for controlled shaping of patellar
groove

26/26/26 (Item 26 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
008733753 **Image available**
WPI Acc No: 1991-237769/199132
Knee joint prosthesis for realistic movement - has tibial and **removal**
components and bearing insert for uni-compartmental **prosthetic knee**
replacement

15/19/2
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

012736711 **Image available**
WPI Acc No: 1999-542828/199946
XRPX Acc No: N99-402583
Cutting guide for **resecting** distal **femur** before **implanting** **prosthetic**
component
Patent Assignee: HOWMEDICA INC (HOWN); AXELSON S L (AXEL-I); BONO J V
(BONO-I); KRACKOW K (KRAC-I); LOMBARDO A (LOMB-I); STRYKER TECHNOLOGIES
CORP (STRY-N); HOWMEDICA OSTEONICS CORP (HOWN)
Inventor: AXELSON S L; BONO J V; KRACKOW K A; LOMBARDO A; KRACKOW K
Number of Countries: 027 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 947169	A2	19991006	EP 99301274	A	19990223	199946 B
JP 11313844	A	19991116	JP 9983098	A	19990326	200005
US 20010001121	A1	20010510	US 9849705	A	19980328	200129
			US 2001758608	A	20010111	
US 6258095	B1	20010710	US 9849705	A	19980328	200141
US 6740092	B2	20040525	US 9849705	A	19980328	200435
			US 2001758608	A	20010111	

Priority Applications (No Type Date): US 9849705 A 19980328; US 2001758608

A 20010111

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 947169	A2	E	39	A61B-017/15	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT					
LI LT LU LV MC MK NL PT RO SE SI					
JP 11313844	A		21	A61F-002/36	
US 20010001121	A1			A61B-017/56	Div ex application US 9849705
US 6258095	B1			A61B-017/58	
US 6740092	B2			A61B-017/58	Div ex application US 9849705

Abstract (Basic): EP 947169 A2

NOVELTY - The guide has a block with guiding surfaces including an anterior **cutting** guide surface for **resecting** the anterior cortex of the **femur**. A **posterior cutting** guide surface **resects** the **posterior condyles**. The guiding surfaces also include anterior and **posterior chamfer cutting** guide surfaces. The block is secured to the distal **femur**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for a **method** of **resecting** the distal **femur** using the guide, and a set of instruments for **resecting** the distal **femur**.

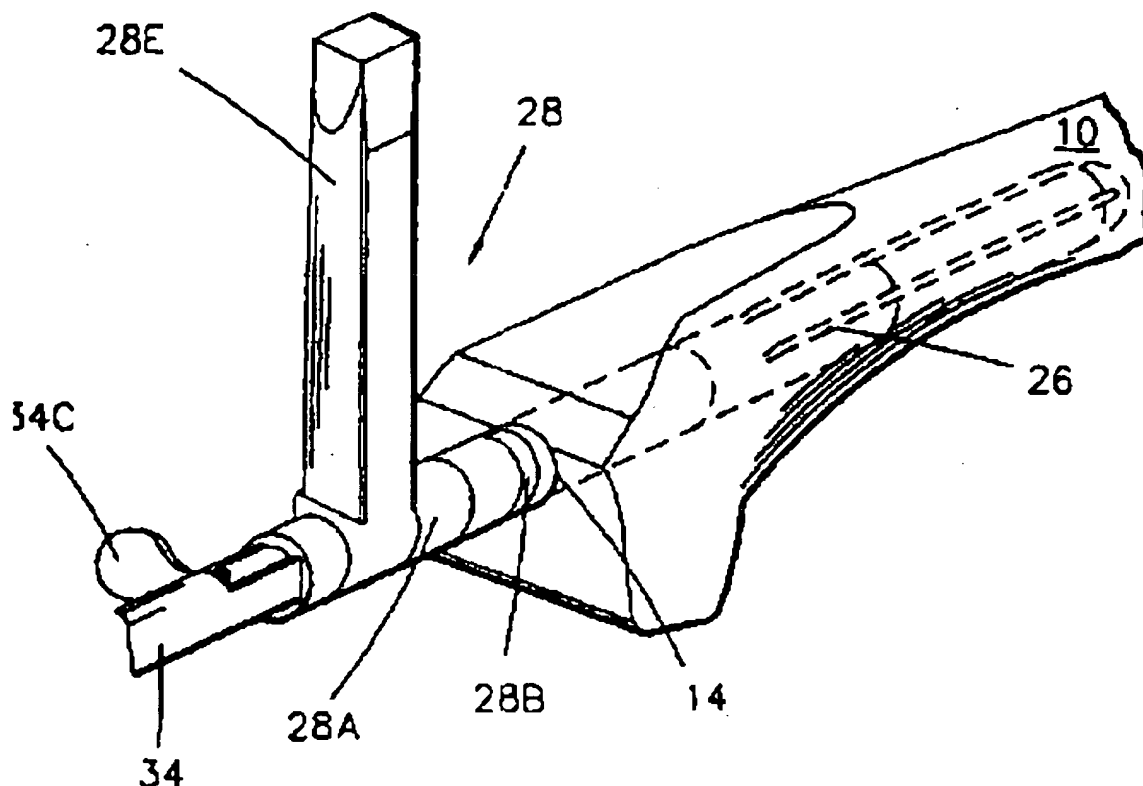
USE - For **knee arthroplasty** and particularly in revision surgery where an **artificial femoral** component is **removed** and replaced.

ADVANTAGE - Maintains proper alignment with the IM canal while **resection cuts** are made. Reduced number of tools. Enhanced accuracy and **stability** of the revision **implant**.

DESCRIPTION OF DRAWING(S) - The diagram shows a broken perspective view of the all-in-one **cutting** block attached to the distal **femur**.

Distal **femur** (10)
Proximal tibia (58)
Spacer block (68)
Sizing indicator (116)
pp; 39 DwgNo 26/36

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Derwent Class: P31; P32
 International Patent Class (Main): A61B-017/15; A61B-017/56; A61B-017/58;
 A61F-002/36
 International Patent Class (Additional): A61F-002/38; A61F-011/00
 File Segment: EngPI

15/19/4
 DIALOG(R) File 350:Derwent WPIX
 (c) 2005 Thomson Derwent. All rts. reserv.

010522338 **Image available**
 WPI Acc No: 1996-019291/199602
 Related WPI Acc No: 1993-359633
 XRPX Acc No: N96-016107

Method of knee joint arthroplasty - involves incrementally reaming canal leaving in place their **resecting distal cutting guide** and replacing with **posterior cutting guide** and **resecting medial and lateral posterior condylar**

Patent Assignee: BERTIN K C (BERT-I)
 Inventor: BERTIN K C
 Number of Countries: 001 Number of Patents: 001
 Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5458645	A	19951017	US 92862953	A	19920403	199602 B
			US 9321039	A	19930223	

Priority Applications (No Type Date): US 92862953 A 19920403; US 9321039 A 19930223

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5458645	A	10	A61F-002/38	Div ex application US 92862953	Div ex patent US 5258032

Abstract (Basic): US 5458645 A

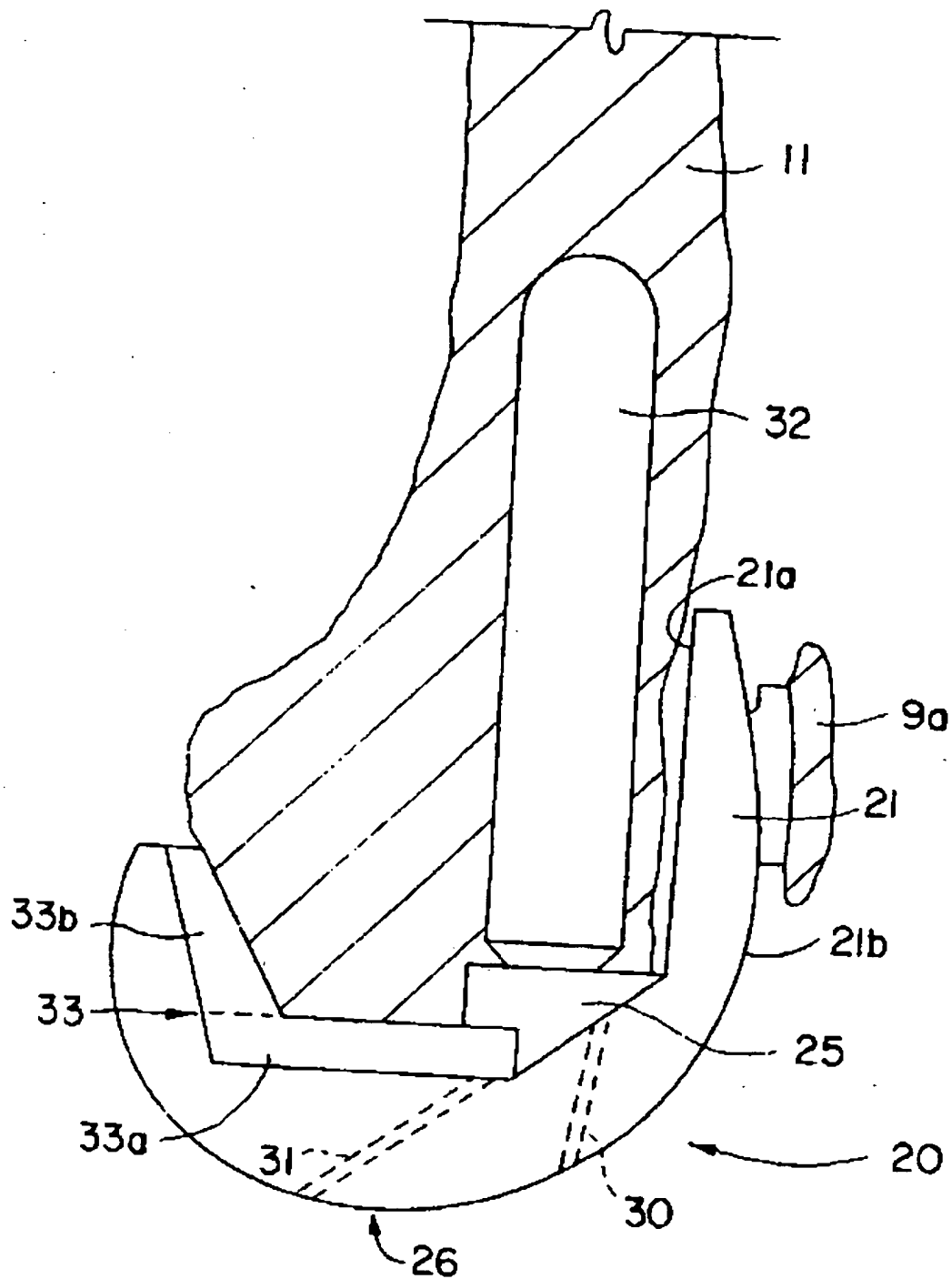
The **method** comprises incrementally reaming the intramedullary canal out to cortical bone with a reamer and leaving the reamer in place and attaching a distal **cutting** guide then **resecting** medial and lateral distal surfaces of the **femur** along the distal **cutting** guide and replacing the distal **cutting** guide with a **posterior cutting** guide and **resecting** medial and lateral **posterior condylar** surfaces of the **femur** along the **posterior cutting** guide. Then **removing** the **posterior cutting** guide and reamer, attaching a provisional intramedullary stem to a provisional **femoral** component with the provisional **femoral** component including an anterior **cutting** guide formed in and an outer surface replicating the size of a permanent **femoral** component, and inserting the stem into said intramedullary canal.

Then evaluating flexion/extension gaps of the **knee** and patella tracking relative to the provisional **femoral** component and establishing correct gaps and soft tissue balance of the **knee** relative to the anatomical size of the **knee**. Then **resecting** an interior surface of the **femur** along the anterior **cutting** guide of the provisional **femoral** component; and finally **removing** said provisional stem and provisional component and inserting a permanent **femoral** component corresponding to said provisional component.

ADVANTAGE - Allows the selected size of a prospective **implant** to be test fit with respect to the distal and **posterior resections** of the **femur** and the soft tissues of the **knee** joint before making the final **resection** of the anterior surface of the **femur**.

Dwg.6/6

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19/19/1
DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

015719160 **Image available**
WPI Acc No: 2003-781360/200374
XRPX Acc No: N03-625983

Femur resection guide for fitting component of knee prosthesis has base with positioners for centro-medullary rod and sliding support

Patent Assignee: BERGUE B (BERG-I)

Inventor: BERGUE B

Number of Countries: 031 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2837692	A1	20031003	FR 20023760	A	20020326	200374 B
EP 1350472	A1	20031008	EP 20036537	A	20030324	200374

Priority Applications (No Type Date): FR 20023760 A 20020326

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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FR 2837692	A1	28		A61B-017/15	
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EP 1350472	A1 F			A61B-017/15	
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Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB

GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

Abstract (Basic): FR 2837692 A1

NOVELTY - The **resection** guide apparatus consists of a centro-medullary rod (10) to be inserted in the **femur** (1), a base (11), positioners (12) and guides (27) for the insertion of **pins** (65, 66). The base is fitted with a sliding support (13) that can move in an anterior-posterior direction relative to the **femur** and is equipped with the guides. It also has thrust elements (14) for the rear zones of the **femur condyles** (1a) that are connected to the support, and a micrometer adjuster (16) for an anterior thrust member (15).

USE - Determining **resection** lines for fitting **knee prosthesis** component to **femur**.

ADVANTAGE - The apparatus permits more precise and rapid selection of **femur resection** lines.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section of the **resection** line guide apparatus in side view.

Centro-medullary rod (10)

Base (11)

Positioners (12)

Sliding support (13)

Rear thrust elements (14)

Anterior thrust member (15)

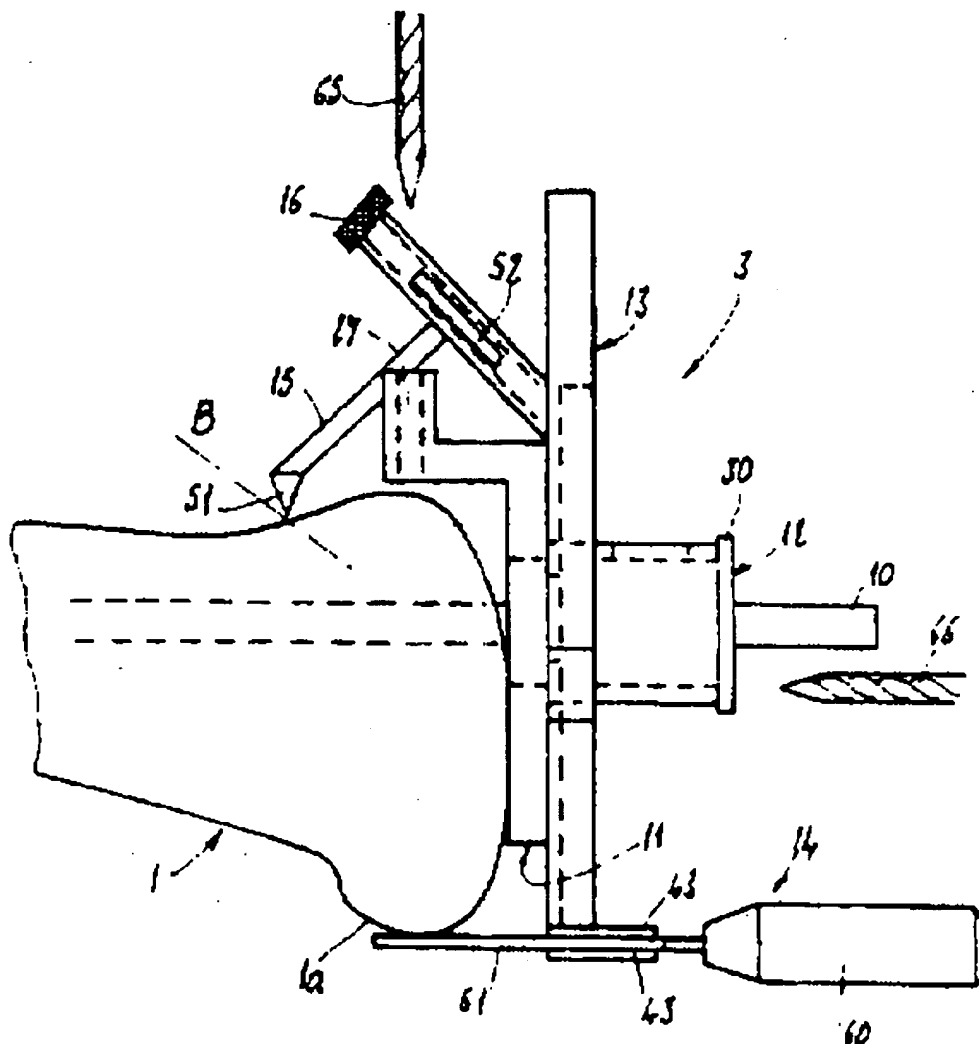
Micrometer adjuster (16)

Guides (27)

Pins (65, 66)

pp; 28 DwgNo 1/15

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Derwent Class: P31
International Patent Class (Main): A61B-017/15
File Segment: EngPI

19/19/2
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

015405942 **Image available**
WPI Acc No: 2003-468083/200344
Related WPI Acc No: 2003-468082
XRPX Acc No: N03-372616

Surgical instrument for minimally invasive unicompartmental knee replacement surgery, has tibial stylus comprising stylus arm having curvature from anterior to posterior to accommodate anatomic curvature of femoral condyle

Patent Assignee: FENCL R M (FENC-I); HARRIS B R (HARR-I); HARTDEGEN V R (HART-I); ROSA R A (ROSA-I); STOOKEY E A (STOO-I)

Inventor: FENCL R M; HARRIS B R; HARTDEGEN V R; ROSA R A; STOOKEY E A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030100907	A1	20030529	US 2001333488	P	20011128	200344 B
			US 2002305371	A	20021127	

Priority Applications (No Type Date): US 2001333488 P 20011128; US
2002305371 A 20021127

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030100907	A1	54	A61F-005/00	Provisional application US 2001333488

Abstract (Basic): US 20030100907 A1

NOVELTY - A tibial stylus (30) for attachment to a tibial cutting guide (10) comprises a stylus arm (32) which has a curvature from anterior to **posterior** to accommodate an anatomic curvature of a corresponding **femoral condyle**. The stylus arm is positioned to rest on a tibial plateau (139) prior to preparation on a planar surface.

DETAILED DESCRIPTION - The stylus arm is positioned to rest on the tibial plateau via the movement of the tibial cutting guide along the long axis of tibia (138) to establish a location for **resection slot** (24) corresponding to predetermined depth for the planar surface below the level where stylus arm rests on tibial plateau. The tibial cutting guide is positioned along the tibia and moved along the long axis of the tibia to vary the location of the **resection slot** along the tibia. The planar **resection slot** of tibial cutting guide is adapted to receive a cutting member to prepare the planar surface along the tibial plateau of the tibia by extending from anterior to **posterior**. INDEPENDENT CLAIMS are also included for the following:

(a) a **posterior resection block** for preparing **posterior femoral resection** in minimally invasive unicompartmental **knee replacement surgery**;

(b) an instrument for surgically preparing **femoral condyle** to receive **prosthetic femoral component** in minimally invasive unicompartmental **knee replacement surgery**;

(c) an instrument for intramedullary alignment of **femoral instruments** in minimally invasive unicompartmental **knee replacement surgery**;

(d) an instrument for preparing **femur** to receive **femoral fixation peg** and **femoral fixation fin** of **prosthetic femoral component** to be **implanted** on surgically prepared **femoral condyle** in **knee replacement surgery**; and

(e) an instrument for preparing tibia to receive **posterior** and anterior tibial fixation **pegs**.

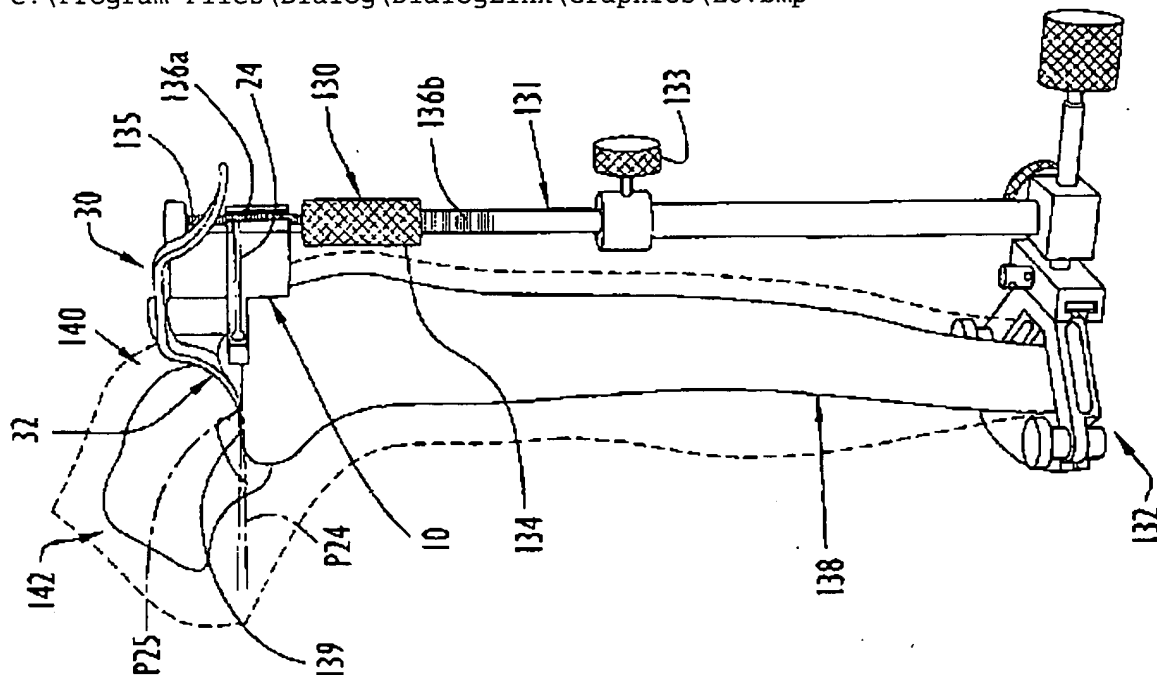
USE - For establishing location of tibial **resection** along tibial plateau in minimally invasive unicompartmental **knee replacement surgery**.

ADVANTAGE - Removes minimal amount of bone to accommodate **knee joint prosthesis** in unicompartmental **knee replacement** procedure performed through minimal incision. Promotes **stable** and secure fixation of **prosthetic femoral** and tibial components to bone. Accurately establishes areas of **femoral condyle** and tibial plateau to be prepared to receive **knee joint prosthesis**. Utilizes minimal number of components and steps of limited complexity in performing unicompartmental **knee joint replacement**. Facilitates anatomical **femoral-tibial tracking** of **knee joint prosthesis**. Promotes reproducible, accurate bone preparation. Enhances reproducible, proper alignment between **prosthetic femoral** and tibial components.

DESCRIPTION OF DRAWING(S) - The figure shows the broken perspective view of the tibial alignment guide positioned on the tibia with a stylus arm of the tibial stylus resting on lowermost surface of medial tibial plateau.

Tibial cutting guide (10)
 Resection slot (24)
 Tibial stylus (30)
 Stylus arm (32)
 Tibia (138)
 Tibial plateau (139)
 pp; 54 DwgNo 36/64

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Derwent Class: P32
 International Patent Class (Main): A61F-005/00
 File Segment: EngPI

19/19/4
 DIALOG(R)File 350:Derwent WPIX
 (c) 2005 Thomson Derwent. All rts. reserv.

012531743 **Image available**
 WPI Acc No: 1999-337849/199928
 XRPX Acc No: N99-253198

Instrument set including femoral resection guide for preparation of natural bone in a condylar joint

Patent Assignee: PAPPAS M J (PAPP-I)
 Inventor: PAPPAS M J

Number of Countries: 082 Number of Patents: 006
 Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9925263	A1	19990527	WO 98US24589	A	19981118	199928 B
AU 9915277	A	19990607	AU 9915277	A	19981118	199943

Serial 10/616102

March 23, 2005

EP 1032319	A1	20000906	EP 98959490	A	19981118	200044
			WO 98US24589	A	19981118	
AU 735465	B	20010712	AU 9915277	A	19981118	200147
JP 2001522686	W	20011120	WO 98US24589	A	19981118	200204
			JP 2000520701	A	19981118	
US 6344043	B1	20020205	US 9765672	P	19971118	200211
			WO 98US24589	A	19981118	
			US 2000529848	A	20000419	

Priority Applications (No Type Date): US 9765672 P 19971118; US 2000529848
A 20000419

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9925263	A1	E	33	A61B-017/56	
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Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU
CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
TR TT UA UG US UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9915277	A				Based on patent WO 9925263
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EP 1032319	A1	E		A61B-017/56	Based on patent WO 9925263
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Designated States (Regional): DE FR GB IE IT

AU 735465	B			A61B-017/56	Previous Publ. patent AU 9915277
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Based on patent WO 9925263

JP 2001522686	W		32	A61B-017/16	Based on patent WO 9925263
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US 6344043	B1			A61B-017/17	Provisional application US 9765672
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Based on patent WO 9925263

Abstract (Basic): WO 9925263 A1

NOVELTY - Anterior-posterior femoral resection guide (12) having detachable collets including drill guide (14) and reamer bushes (18A) is aligned with anterior femoral cortex using yoke. Intramedullary rod inserted in pre-drilled hole allows proper positioning in relation to tibia and bone pins in apertures (30) prevent rotation. A saw resects anterior and posterior portions of condyles of femur.

DETAILED DESCRIPTION - Reference is made to ULTRA (RTM), Buechel-Pappas (RTM) and Rebar (RTM).

USE - Primary and revision Implantation of knee prosthesis.

ADVANTAGE - Minimal tool set. Same set of tools serve several functions e.g. evaluating spacing between tibia and femur, and guidance for resection of femur.

DESCRIPTION OF DRAWING(S) - The drawing shows Anterior-posterior femoral resection guide and accompanying collets.

Anterior-posterior femoral resection guide (12)

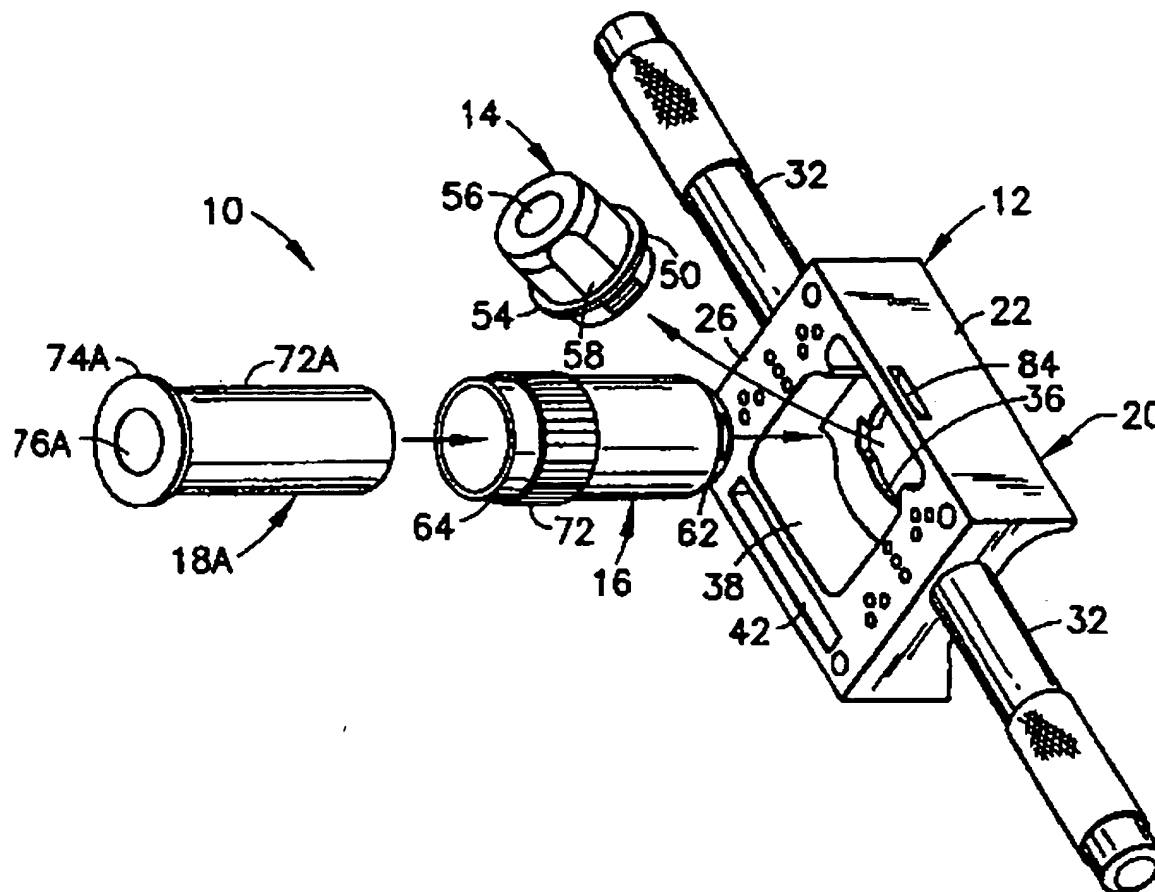
drill guide (14)

reamer bushes (18)

apertures fro pins (30)

pp; 33 DwgNo 1/15

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Derwent Class: P31; P32

International Patent Class (Main): A61B-017/16; A61B-017/17; A61B-017/56

International Patent Class (Additional): A61B-017/14; A61F-002/36

File Segment: EngPI

19/19/5

DIALOG(R) File 350:Derwent WPIX

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012324200 **Image available**

WPI Acc No: 1999-130306/199911

XRPX Acc No: N99-094797

Total knee arthroplasty surgical apparatus - has femoral positioning jig with pair of holes, one circular and other oblong or kidney shaped, for receiving drill bushing corresponding to medial and lateral condyles of femur

Patent Assignee: STRYKER TECHNOLOGIES CORP (STRY-N); HOWMEDICA INC (HOWN)
; AXELSON S L (AXEL-I); BONO J V (BONO-I); WARTEL D J (WART-I)

Inventor: AXELSON S L; BONO J V; WARTEL D J

Number of Countries: 027 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5860980	A	19990119	US 97929034	A	19970915	199911 B
EP 903111	A2	19990324	EP 98306816	A	19980826	199916
JP 11164845	A	19990622	JP 98259672	A	19980914	199935
EP 903111	B1	20040303	EP 98306816	A	19980826	200417
DE 69822055	E	20040408	DE 622055	A	19980826	200425

EP 98306816 A 19980826

Priority Applications (No Type Date): US 97929034 A 19970915

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 5860980	A		11	A61B-017/56	
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EP 903111	A2	E		A61B-017/15	
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT

LI LT LU LV MC MK NL PT RO SE SI

JP 11164845	A		8	A61F-002/46	
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EP 903111	B1	E		A61B-017/15	
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Designated States (Regional): DE FR GB IE IT

DE 69822055	E			A61B-017/15	Based on patent EP 903111
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Abstract (Basic): US 5860980 A

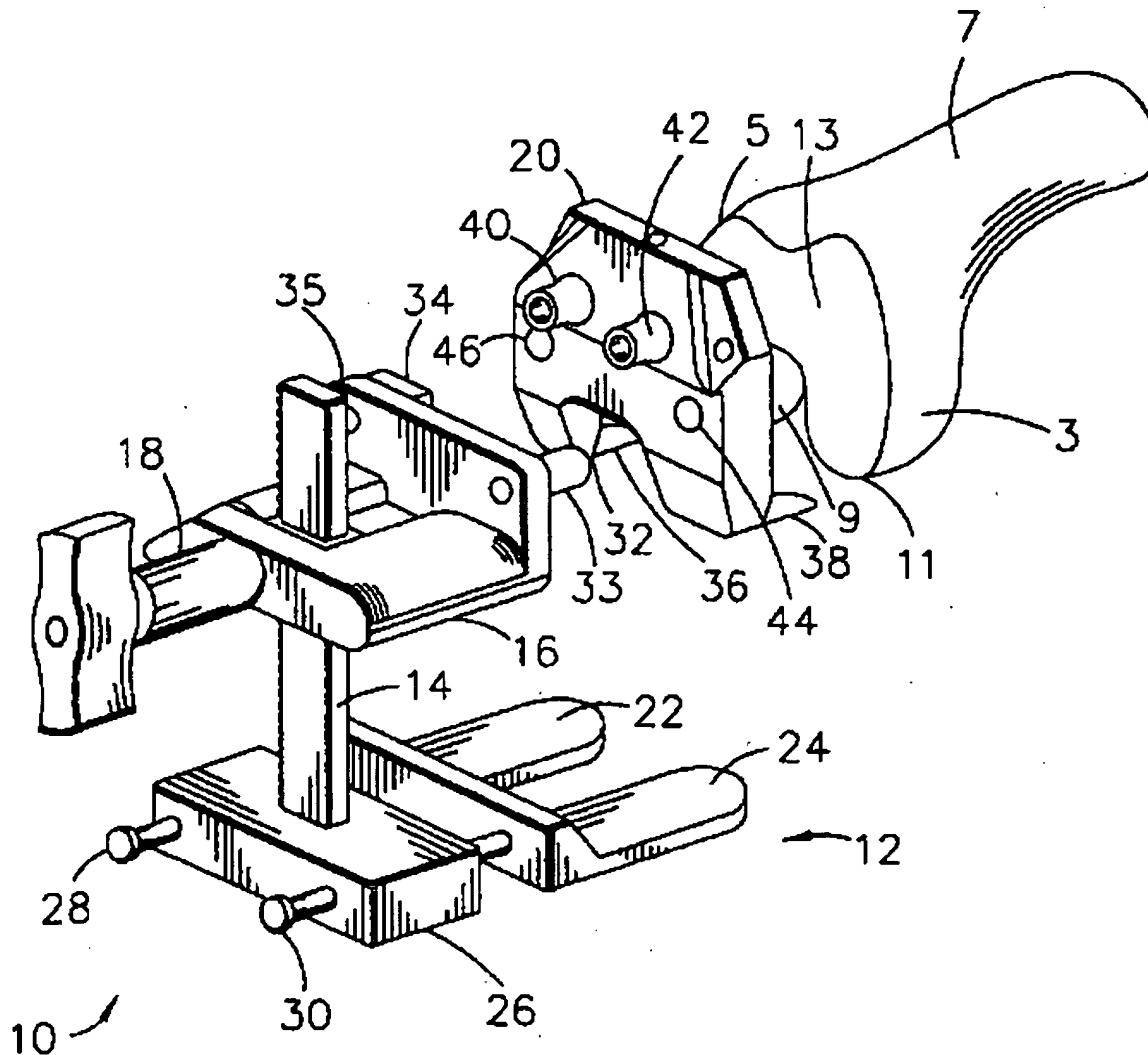
The apparatus has a tibia engaging plate (12) coupled to an upstanding rack element (14), a **drill** bushing bracket (16) coupled to the rack member by a lockable pinion element (18) and a **femoral** positioning jig (20) that is rotatably coupled to the **drill** bushing bracket. The **drill** bushing bracket has a pair of spaced apart **drill** bushings dimensioned to correspond in position to the medial and lateral **condyles** of the **femur**, and the centres of which lie in a plane parallel to that in which the tibia engaging plate lies.

The **femoral** positioning jig has a pair of **posterior** skids (36,38), one each for the lateral and medial **posterior condyles**, a pair of holes (40,42) for attaching the jig to the **resected** distal **femur** with spikes, and a pair of shaped holes (44,46) for receiving the **drill** bushings. The hole for receiving the medial **drill** bushing is circular and the hole for receiving the lateral **drill** bushing is oblong or kidney shaped, allowing the positioning jig (and) the **femur** to rotate about the axis of the medial **drill** bushing.

ADVANTAGE - Allows the impact of soft tissues on balance of **knee** to be accurately assessed so that **prosthetic knee** can be accurately installed.

Dwg.1/8

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Derwent Class: P31; P32
International Patent Class (Main): A61B-017/15; A61B-017/56; A61F-002/46
International Patent Class (Additional): A61B-017/02; G11B-007/007
File Segment: EngPI

19/19/6
DIALOG(R) File 350:Derwent WPIX
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010967064 **Image available**
WPI Acc No: 1996-464013/199646
Related WPI Acc No: 1995-310812; 1998-007851
XRPX Acc No: N96-390863

Sizing and drilling assembly for determining optimum size femoral component of knee prosthesis - has pivoted stylus that slides in body, with flat surface contacting resected surface of femur and feet, and engages anterior femoral cortex

Patent Assignee: DEPUY INC (DEPU-N)
Inventor: HAMM J E; KELMAN D C; MCNULTY D E; MORELAND J R
Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5562675	A	19961008	US 92937704	A	19920901	199646 B
			US 95437848	A	19950509	

Priority Applications (No Type Date): US 92937704 A 19920901; US 95437848 A 19950509

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5562675	A	17	A61B-017/56		Div ex application US 92937704
					Div ex patent US 5445642

Abstract (Basic): US 5562675 A

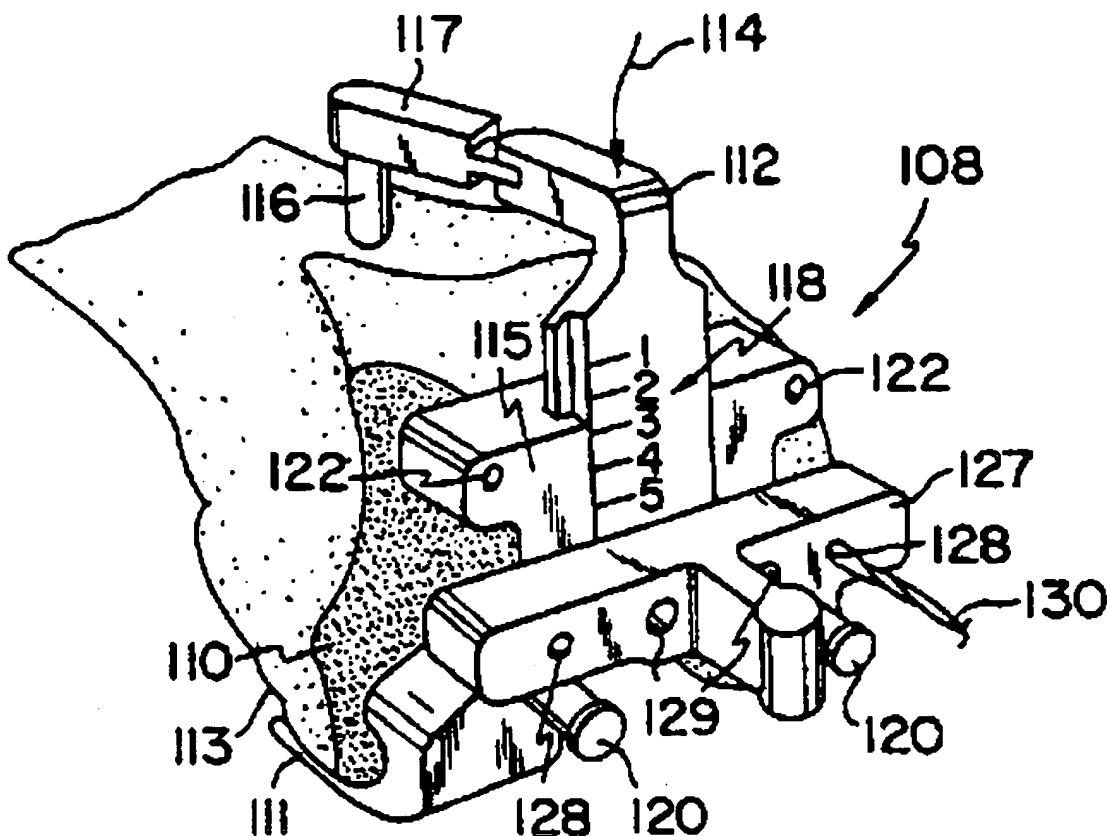
The sizing and **drilling** assembly comprises a body portion including a flat contact surface for engaging the **resected** end of the **femur** and a number of feet coupled to a bottom surface of the body for engaging **posterior femoral condyles** to align the body portion with the **resected** distal end of the **femur**. It also has a stylus assembly slidably coupled to the body portion, the stylus assembly including an arm extending away from the body portion and a stylus coupled to the arm, the stylus assembly being movable relative to the body portion until the stylus engages the anterior **femoral** cortex.

There is a member on the stylus assembly and body portion for indicating the size of **femoral** component corresponding to the **resected femur** based on the position of the stylus assembly relative to the body portion a number of **drill** bushings of various sizes. It also has a support member coupled to the stylus assembly for supporting a **drill** bushing selected from the number of **drill** bushings, the selected bushing corresponding to the size of the **femoral** component indicated by the indicating device.

ADVANTAGE - Places less strain, wear and tear on the patella tendon and reduces soft tissue release for proper tracking of the patellar mechanism.

Dwg.10/20

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Derwent Class: P31
International Patent Class (Main): A61B-017/56
File Segment: EngPI

19/19/7
DIALOG(R)File 350:Derwent WPIX
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010770713 **Image available**
WPI Acc No: 1996-267667/199627
XRPX Acc No: N96-225105

Instrument for performing knee replacement surgery - has tibial mounted platform having formed keyed slot for receiving spacer on positioning element and guide for guiding drill

Patent Assignee: JOHNSON & JOHNSON PROFESSIONAL (JOHJ)

Inventor: LUCKMAN T

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5520695	A	19960528	US 92837306	A	19920214	199627 B
			US 94242945	A	19940516	

Priority Applications (No Type Date): US 92837306 A 19920214; US 94242945 A 19940516

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes

US 5520695 A 11 A61B-017/56 Div ex application US 92837306

Abstract (Basic): US 5520695 A

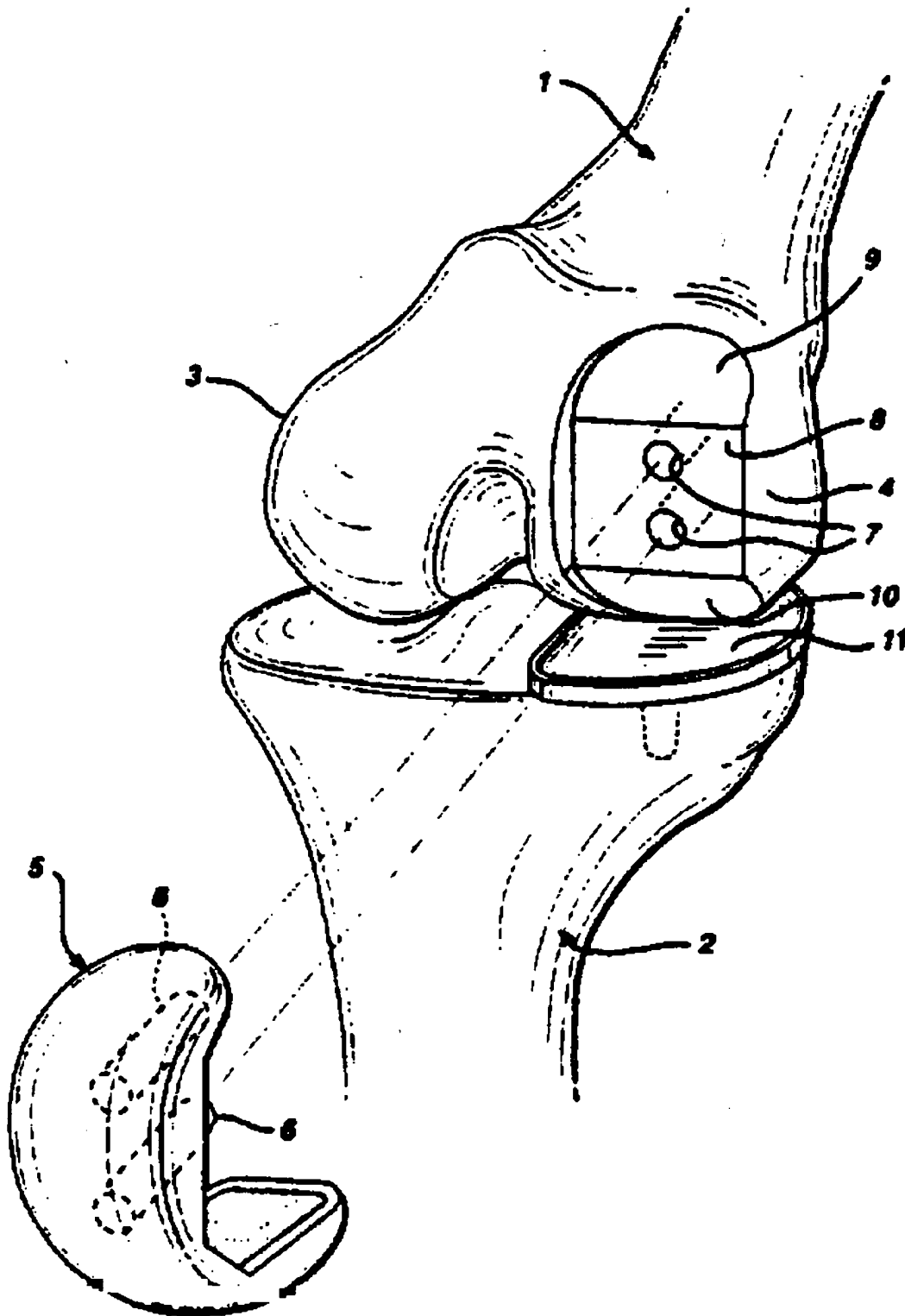
The instrument includes a tibial mounted platform which has formed thereon a keyed slot for receiving a spacer which spacer is positioned between the **femur** and tibia of the **knee** joint being replaced. The spacer receives thereon a positioning element which positioning element includes guides for guiding a **drill** to **drill** mounting holes for mounting further instruments used in the **knee** operation. In particular, the mounting holes are **drilled** when the **femur** and tibia are in a predetermined angular relationship with the spacer providing a predetermined spacial relationship. In this way. The mounting holes are properly determined and positioned with respect to the relationship between the **femur** and tibia.

A saw guide is mounted to the mounting holes and used to guide a saw when **cutting** the anterior chamfer, the **posterior** chamfer and the **posterior femoral cut**. A further **drill** guide is then mounted to the mounting holes after **removal** of the saw guide for **drilling** holes for receiving the lugs of the **condyle prosthesis**.

ADVANTAGE - The **cut** on the proximal tibia is related to the **cuts** made on **femur** for the reception of the **prosthesis**.

Dwg.1/11

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Derwent Class: P31
International Patent Class (Main): A61B-017/56
File Segment: EngPI

19/19/8

DIALOG(R) File 350:Derwent WPIX
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010542954 **Image available**

WPI Acc No: 1996-039908/199604

XRPX Acc No: N96-033645

Inter-condylar notch cutter for posterior stabilised femoral knee prosthesis - with plunge milling bit and bit guide engageable to parallel tracks having guide sleeve, and thrustable into femur and translated through it without removing trial prosthesis

Patent Assignee: SULZER ORTHOPEDICS INC (SULZ); INTERMEDICS ORTHOPEDICS INC (INTE-N)

Inventor: HIGGINS J C; MUMME C W; PERRONE C H; VINCIGUERRA J D

Number of Countries: 019 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9533414	A1	19951214	WO 95US6786	A	19950526	199604 B
US 5554158	A	19960910	US 94252689	A	19940602	199642
			US 95451530	A	19950526	
EP 762851	A1	19970319	EP 95921484	A	19950526	199716
			WO 95US6786	A	19950526	
EP 762851	B1	20000719	EP 95921484	A	19950526	200037
			WO 95US6786	A	19950526	
DE 69518077	E	20000824	DE 618077	A	19950526	200048
			EP 95921484	A	19950526	
			WO 95US6786	A	19950526	
ES 2149992	T3	20001116	EP 95921484	A	19950526	200064

Priority Applications (No Type Date): US 94252689 A 19940602; US 95451530 A 19950526

Cited Patents: US 4721104; US 5098436; US 5100409; US 5176684

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9533414	A1	E	18	A61B-017/17	
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Designated States (National): CA JP

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

US 5554158	A	6	A61B-017/56	Cont of application US 94252689
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EP 762851	A1	E	1	A61B-017/17	Based on patent WO 9533414
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Designated States (Regional): DE ES FR GB IT NL SE

EP 762851	B1	E		A61B-017/17	Based on patent WO 9533414
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Designated States (Regional): DE ES FR GB IT NL SE

DE 69518077	E			A61B-017/17	Based on patent EP 762851
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Based on patent WO 9533414

ES 2149992	T3			A61B-017/17	Based on patent EP 762851
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Abstract (Basic): WO 9533414 A

A distal **femoral** trial **prosthesis** has a medial **condyle** part adapted to fit onto a **resected** distal part of the **femur** in place of the patient's medial **condyle**, having a first distal convex articulating surface with a first groove extending in an anterior-**posterior** direction along the first surface. A lateral **condyle** part is adapted to fit onto the **resected** distal part of the **femur** in place of the patient's lateral **condyle**, having a second distal convex articulating surface with a second groove extending in an anterior-**posterior** direction along said second surface, parallel to the first groove. The medial and lateral **condyle** parts are spaced apart from each other a

distance sufficient to allow **cutting** of the inter-**condylar** notch between.

An inter-**condylar** notch **cutter** has a medial concave guide surface fitted to slide on the medial convex articulating surface, having a first **pin** adapted to be slidably received in the first groove. A lateral concave guide surface is fitted to slide on the lateral convex articulating surface, having a second **pin** adapted to be slidably received in the first groove and a sleeve is mounted between the medial and lateral guide surfaces. A milling bit is rotatably received in the sleeve, adapted to fit between the medial and lateral **condyle** parts of the distal **femoral** trial **prosthesis**.

ADVANTAGE - Can be used after a **femoral** trial **prosthesis** has been **implanted** and without **removing** the trial **prosthesis**, provide a notch **cutter** which **removes** a minimal amount of bone, is limited in anterior-**posterior** motion, and has a **cutting** implement which is limited to following a proposed path for a keel of a **posterior** stabilised tibial component.

Dwg.1/5

Abstract (Equivalent): US 5554158 A

A surgical apparatus for **cutting** an intercondylar notch in a distal end of a patient's **femur** for receiving a **posterior** stabilized knee **prosthesis**, said apparatus comprising:

- a distal **femoral** trial **prosthesis** having an anterior side and a **posterior** side,

- a notch **cutter**, and

- means for guiding said notch **cutter** with respect to said trial **prosthesis**,

- said distal **femoral** trial **prosthesis** providing access to an area of the distal end of the patient's **femur** between the medial and lateral **condyles** and having at least one trial **condylar** articulating surface replicating a **condylar** articulating surface of a corresponding permanent **femoral** **prosthesis**,

- said notch **cutter** having means for slidably **stabilizing** said notch **cutter** on said trial **condylar** articulating surface for relative sliding articulation, and means connected to said **stabilizing** means for milling a notch in said area between said medial and lateral **condyles**,

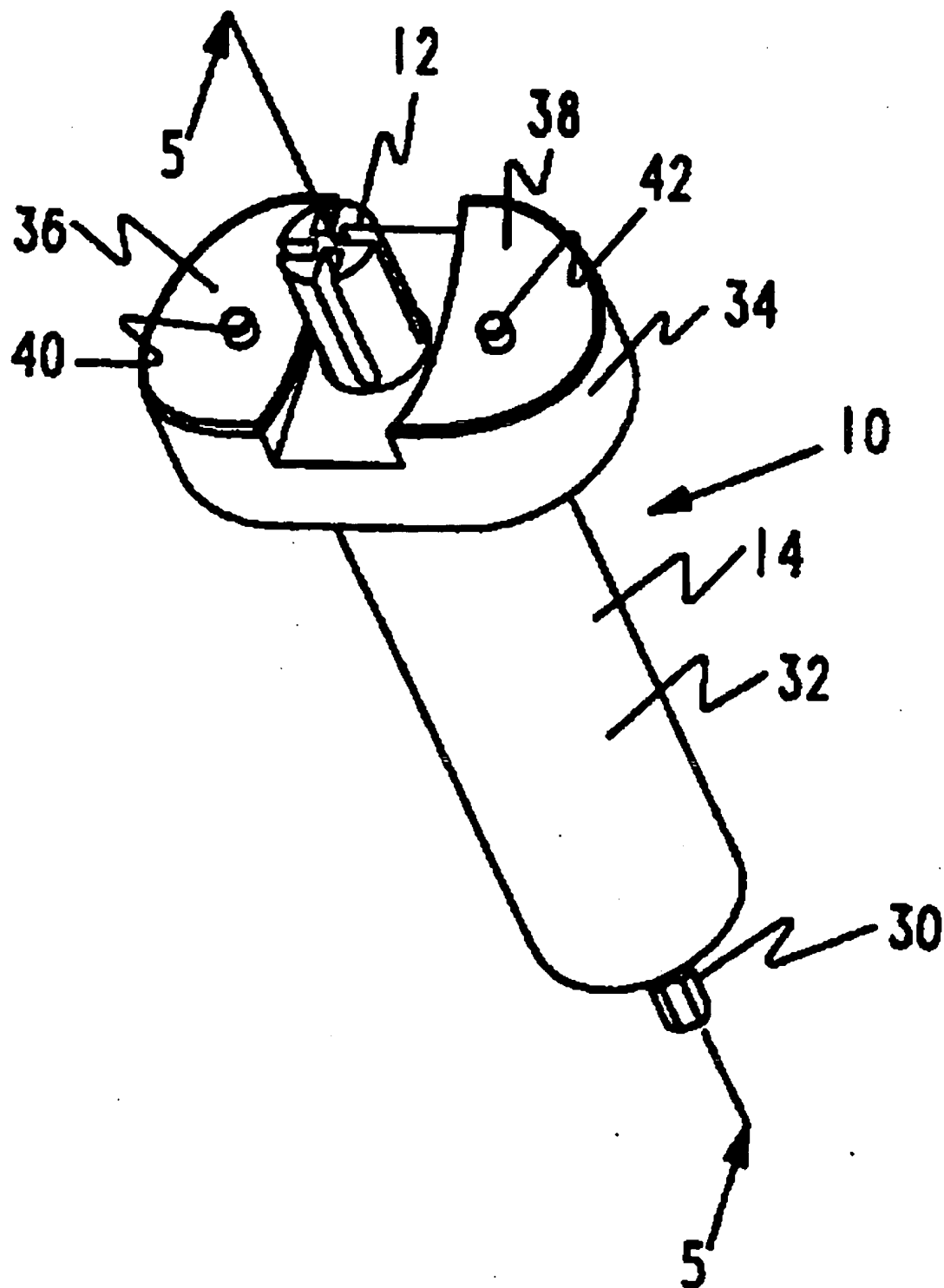
- said at least one trial **condylar** articulating surface comprising a medial articulating surface and a lateral articulating surface, said medial and lateral articulating surfaces being spaced apart from one another to provide said access to said area of the patient's **femur** between the medial and lateral **condyles**,

- said means for guiding comprising at least one slot and means for tracking said slot, and

- means for limiting the motion of said notch **cutter** comprising end stops on said at least one slot.

Dwg.1/5

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Derwent Class: P31
International Patent Class (Main): A61B-017/17; A61B-017/56
File Segment: EngPI

19/19/9
DIALOG(R) File 350:Derwent WPIX

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007202017

WPI Acc No: 1987-199026/198729

XRPX Acc No: N87-149018

Partially-shaped femur prepn. tool - has template positionable on femoral surface and provided with U-shaped slot to receive drill

Patent Assignee: DOW CORNING CORP (DOWO)

Inventor: KAUFMAN M E; WHITESIDE L A

Number of Countries: 003 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
AU 8665866	A	19870604	AU 8665866	A	19861201	198729 B
US 4721104	A	19880126	US 85803368	A	19851202	198807
CA 1254811	A	19890530	CA 529280	A	19870209	198926

Priority Applications (No Type Date): US 85803368 A 19851202

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
AU 8665866	A	26		
US 4721104	A	12		

Abstract (Basic): AU 8665866 A

A template has a bottom adapted to be placed on a flat distal **femoral** surface such that a U-shaped slot of substantially the same size and shape as the **stabilising** housing passing through the template is situated over that portion of the **femur** which is to be **removed** to provide a shaped recess in the distal **femur** for the receipt of the **stabilising** housing of the **femoral** component. The open-ended portion of the slot of the template opens in the direction of the **posterior** portion of the **femur** when the template is placed on the **femur**.

The slot is adapted to cooperate with and closely engage the sides of a **drill**. The template has a sufficient thickness between the bottom and the top of the template to direct the **drill** into the **remur**, relative to the flat distal **femoral** surface, to create at least a major portion of the recess.

USE - A device for completing the preparation of a distal **femur** which has been partially shaped to receive a **femoral** component of a **posterior-stabilised knee implant** where the **femur** has been shaped to contain a flat distal **femoral** surface.

Abstract (Equivalent): US 4721104 A

A template has a bottom surface which is adapted to be placed in an aligning relationship with the flat surface of a distal **femur**, which has been partially shaped to receive the **femoral** component of a **posterior-stabilised knee implant prosthesis**. A U-shaped slot passes through the template, where the slot is of the same size and shape as the outer periphery of the inter **condylar stabilising** housing present on the **femoral** component to be **implanted**.

A **drilling** is pref. in the form of an end-mill **cutter**, having a stop. The **drilling** closely engages the sides of the U-shaped slot in the template so that the **drilling** can be passed through the U-shaped slot until the stop contacts a surface of the guide. It is then drawn along the slot to create a precisely shaped and aligned recess in the **femur** for receipt of the inter **condylar stabilising** housing.

USE - Surgical apparatus for providing an accurately placed recess in a distal **femoral** surface for the inter **condylar stabilising** housing

of a **posterior-stabilised knee implant prosthesis**.
Derwent Class: P31; P32
International Patent Class (Additional): A61B-017/58; A61F-005/04
File Segment: EngPI

21/19/1
DIALOG(R)File 350:Derwent WPIX
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015791168 ****Image available****
WPI Acc No: 2003-853371/200379
XRPX Acc No: N03-681646

Total knee arthroplasty for treating excessive deterioration of knee cartilage, involves connecting femoral component, tibial component, and patella component to femur distal end, to tibia proximal end, and patella posterior portion

Patent Assignee: SWANSON T V (SWAN-I)
Inventor: SWANSON T V
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030212403	A1	20031113	US 2002143203	A	20020510	200379 B

Priority Applications (No Type Date): US 2002143203 A 20020510
Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030212403	A1	20	A61B-017/58	

Abstract (Basic): US 20030212403 A1

NOVELTY - The **knee** joint is accessed through an incision. The distal end of a **femur** (F), the proximal end of a tibia, and the **posterior** portion of a patella are **resected** at the **knee** joint. A **femoral** component, a tibial component, and a patella component are passed through the incision, and connected to the **femur** distal end, to the tibia proximal end, and the patella **posterior** portion, respectively.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) a patellar **cutting** guide; and
- (b) a patella **posterior** portion re-sectioning **method**.

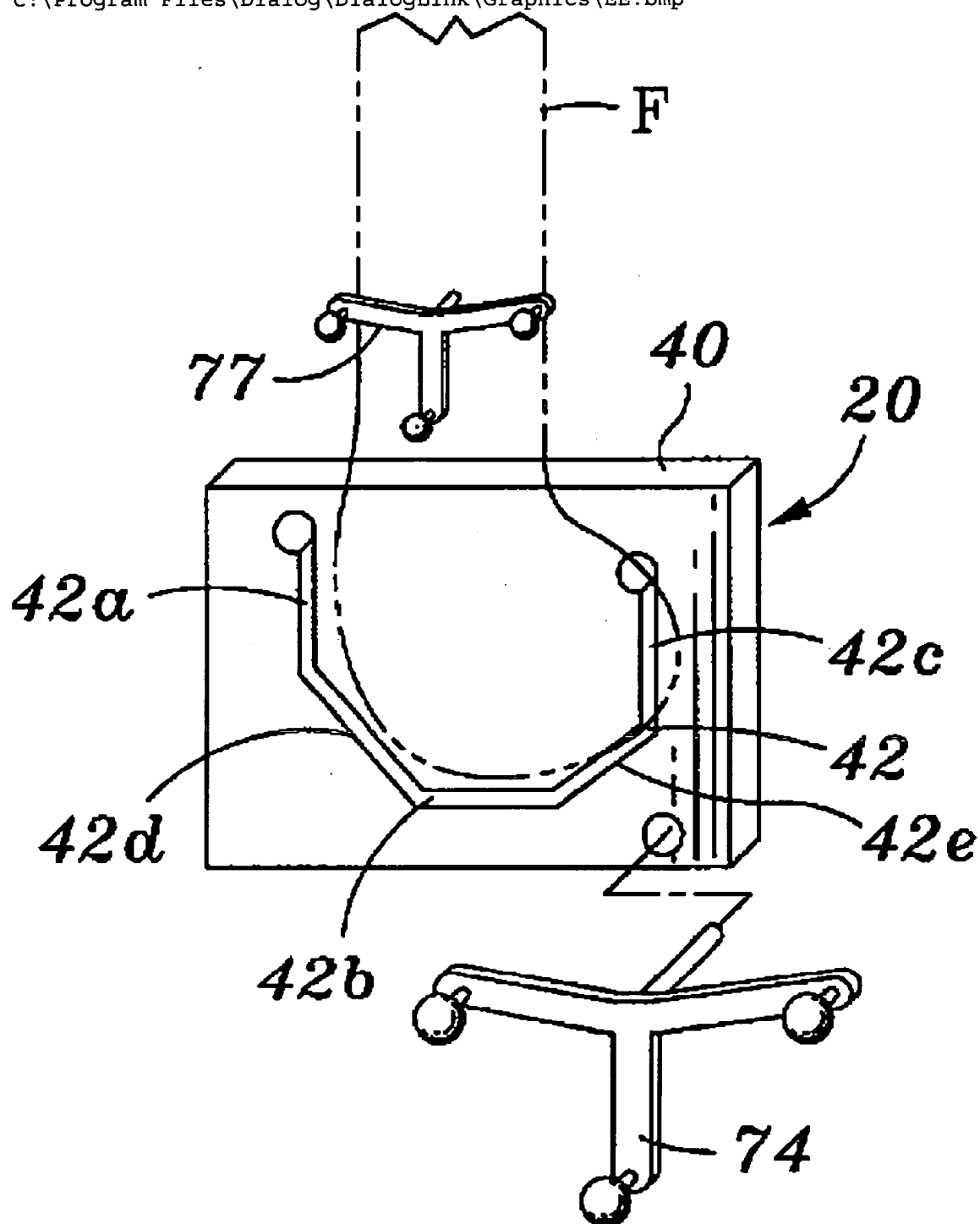
USE - For treating excessive deterioration of **knee** cartilage caused by accidents, osteo-arthritis or rheumatoid arthritis.

ADVANTAGE - Minimizes trauma to patient. Prevents everting of patella or displacing of tibia. Eliminates need for access intramedullary canals or **femur** and tibia, and need for clear visualization of common landmarks e.g. epi-condyles, **posterior condylar** surfaces, and tibial tubercle.

DESCRIPTION OF DRAWING(S) - The figure shows the front view of the **femoral cutting** guide.

Femoral cutting guide (20)
Guide body (40)
Slot (42)
Position sensor (77)
Femur (F)
pp; 20 DwgNo 4/14

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Derwent Class: P31
International Patent Class (Main): A61B-017/58
File Segment: EngPI

21/19/2
DIALOG(R) File 350:Derwent WPIX
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014100358 **Image available**
WPI Acc No: 2001-584572/200166
XRPX Acc No: N01-435728

Femur cutting apparatus for fitting total knee prosthesis comprises base with anterior and posterior cutting assemblies and feeler

Patent Assignee: FOURNITURES HOSPITALIERES IND FH IND SA (FOUR-N)

Inventor: AARON A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2806901	A1	20011005	FR 20004306	A	20000404	200166 B

Priority Applications (No Type Date): FR 20004306 A 20000404

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2806901	A1		13	A61B-017/15	

Abstract (Basic): FR 2806901 A1

NOVELTY - The apparatus consists of a base (3) with a foot (15) to rest on the upper **resectioned** end of the tibia, an upright (16) with a slot (25), anterior (5) and **posterior** (8) **femur** cutting assemblies which can slide on the support, and a feeler (7) to press against the anterior face of the **femur** and position the anterior cutting assembly. It also has an assembly (9) with a rod (50) which can pass through the slot in the upright and into the medullary canal of the **femur**, and a **femoral** distraction measuring instrument (21).

USE - **Cutting femur** prior to fitting complete **knee prosthesis**.

ADVANTAGE - The apparatus is relatively simple to use and ensures more reliable **cutting** angles, avoiding unwanted tension on inner and outer ligaments.

DESCRIPTION OF DRAWING(S) - The drawing shows a perspective view of the apparatus.

Base (3)

Anterior **cutting** assembly (5)

Feeler (7)

Posterior cutting assembly (8)

Femoral canal rod assembly (9)

Foot (15)

Upright (16)

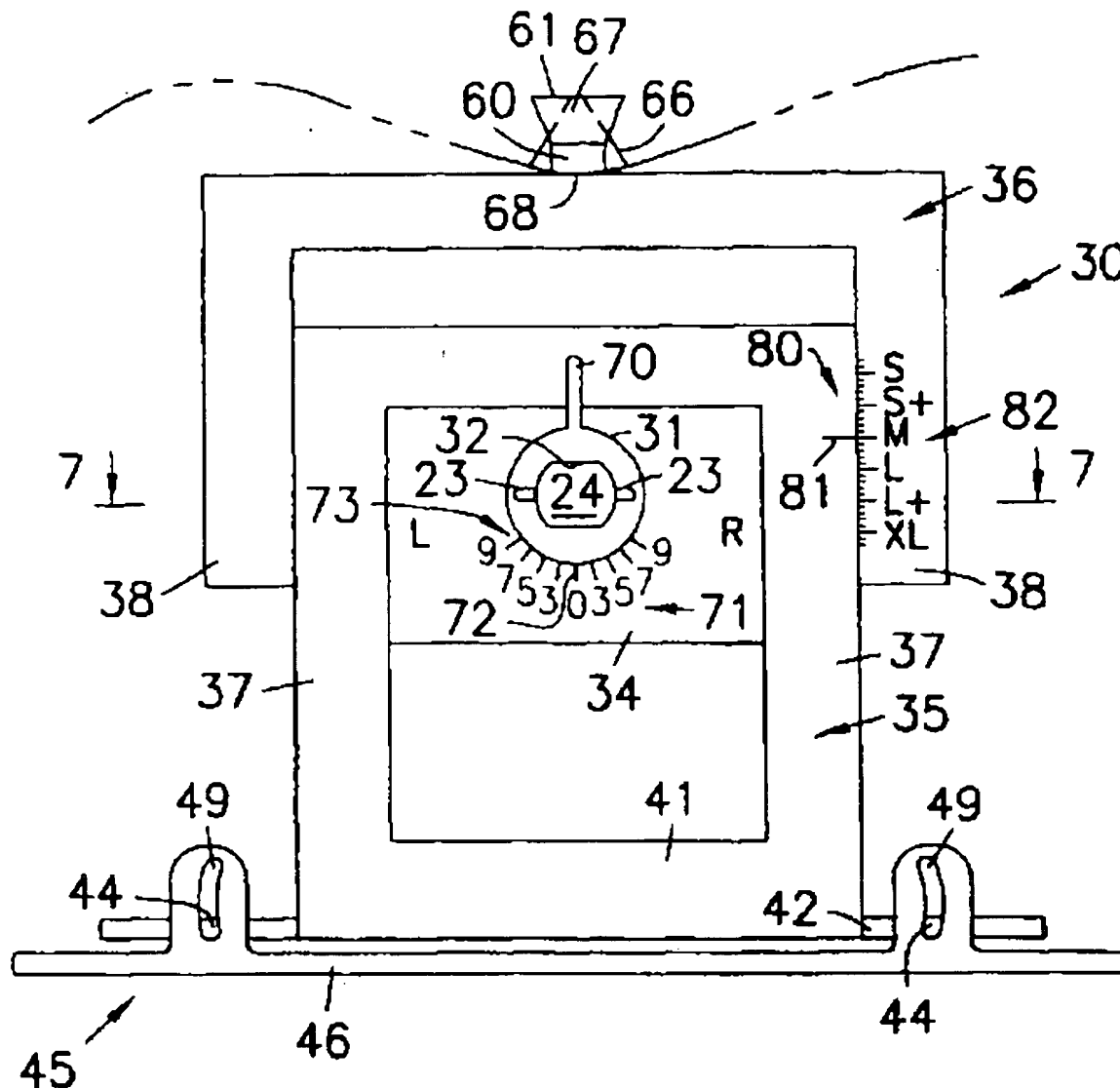
Distraction measuring instrument (21)

Slot (25)

Rod (50)

pp; 13 DwgNo 1/5

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Derwent Class: P31
 International Patent Class (Main): A61B-017/58
 File Segment: EngPI

21/19/5
 DIALOG(R) File 350:Derwent WPIX
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012944342 **Image available**
 WPI Acc No: 2000-116195/200010
 Related WPI Acc No: 2001-557073
 XRPX Acc No: N00-088043

Anterior and posterior referenced sizing and distal femur resection apparatus

Patent Assignee: SULZER ORTHOPEDICS INC (SULZ)
 Inventor: BURKINSHAW B D; DYE D W
 Number of Countries: 023 Number of Patents: 003
 Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6013081	A	20000111	US 98149989	A	19980909	200010 B
WO 200013594	A1	20000316	WO 99US20619	A	19990909	200022
AU 9958173	A	20000327	AU 9958173	A	19990909	200032

Priority Applications (No Type Date): US 98149989 A 19980909

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6013081	A	21	A61B-017/15	
WO 200013594	A1 E		A61B-017/15	
Designated States (National): AU CA JP KR				
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU				
MC NL PT SE				
AU 9958173	A		A61B-017/15	Based on patent WO 200013594

Abstract (Basic): US 6013081 A

NOVELTY - The apparatus (10) has a sizer (12) with a slide stone (14) receiver (22) pivotally and movably mounted in a pair of opposed external grooves. A **femoral cut** guide (16) is movably engaged with the sizer. A reference device (20) is **removably** attachable to the guide for referencing and a distal **cut** guide (18) is **removably** attachable to the guide subsequent to **removal** of the reference device, to position the distal **cut** guide on the **femur**.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a **method** of distal sizing and **resection**.

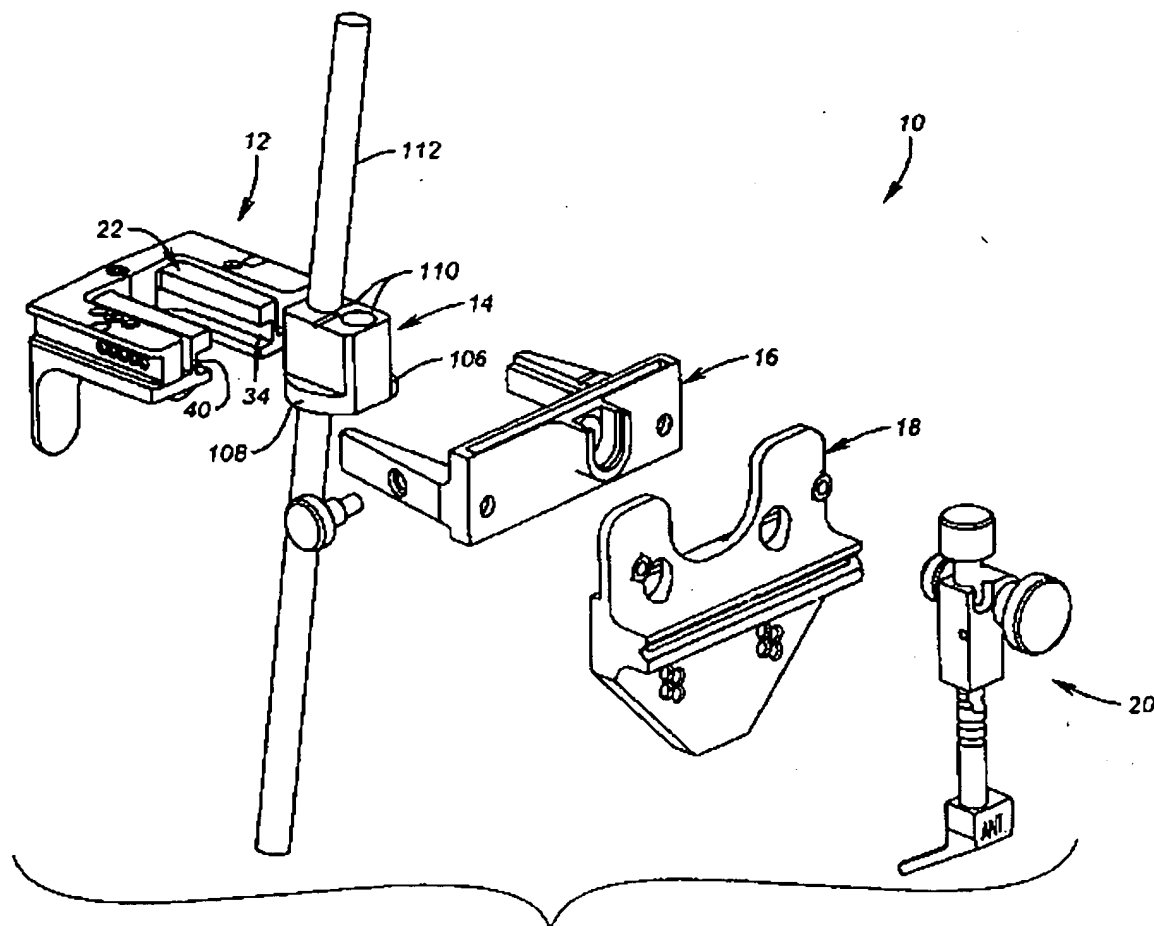
USE - For anterior and **posterior** referenced sizing and distal **femur resection**. For orthopedic surgeons to properly size and reset the distal **femoral** articulating surface in preparation for total **knee arthroplasty**.

ADVANTAGE - Guide slots make both the anterior reference **femoral cut** and the distal **femoral cut** thus providing two locating datums for subsequent use of a chamfer speed block.

DESCRIPTION OF DRAWING(S) - The figure shows an exploded isometric view illustrating one embodiment of a distal **femur** sizing and **resecting** apparatus.

Distal **femur** sizing and **resecting** apparatus (10)
Sizer (12)
Slide stone (14)
Femoral cut guide (16)
Distal **cut** guide (18)
Reference device (20)
Slide stone receiver (22)
pp; 21 DwgNo 1/13

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Derwent Class: P31
International Patent Class (Main): A61B-017/15
File Segment: EngPI

21/19/7

DIALOG(R) File 350:Derwent WPIX
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011590723 **Image available**

WPI Acc No: 1998-007852/199801

Related WPI Acc No: 1996-364154

XRPX Acc No: N98-006271

Instrumentation set used in orthopaedic surgery during revision total knee replacement procedure - has rotational alignment guide with slot for guiding a saw blade for removal of the posterior condyles of the femur, and tensor activated by a torque wrench to apply measured tension force to the joint

Patent Assignee: BRISTOL-MYERS SQUIBB CO (BRIM)

Inventor: BAYS R; BOOTH R E; DIETZEL S E; MILLER T R; SISK B N; STALCUP G C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5688280	A	19971118	US 95369226	A	19950106	199801 B
			US 96686894	A	19960726	

Priority Applications (No Type Date): US 96686894 A 19960726; US 95369226 A

19950106

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5688280	A	14	A61B-017/15	CIP of application US 95369226 CIP of patent US 5540696	

Abstract (Basic): US 5688280 A

The instrumentation set provides numerous systems for verifying to the surgeon that he has correctly aligned the instruments prior to **removing** any bone. The set includes a rotational alignment guide, which aids the surgeon in **establishing** the appropriate rotational alignment for the **knee** as determined by reference to standard **femoral** landmarks such as the **posterior condyles** and **epicondyles**. The rotational alignment guide includes a slot for guiding a saw blade for **removal** of the **posterior condyles** of the **femur**. The set further includes a tensor designed to tense the **knee** joint in flexion and extension. The tensor is activated by a torque wrench so that a measured mount of tension force can be applied to the joint.

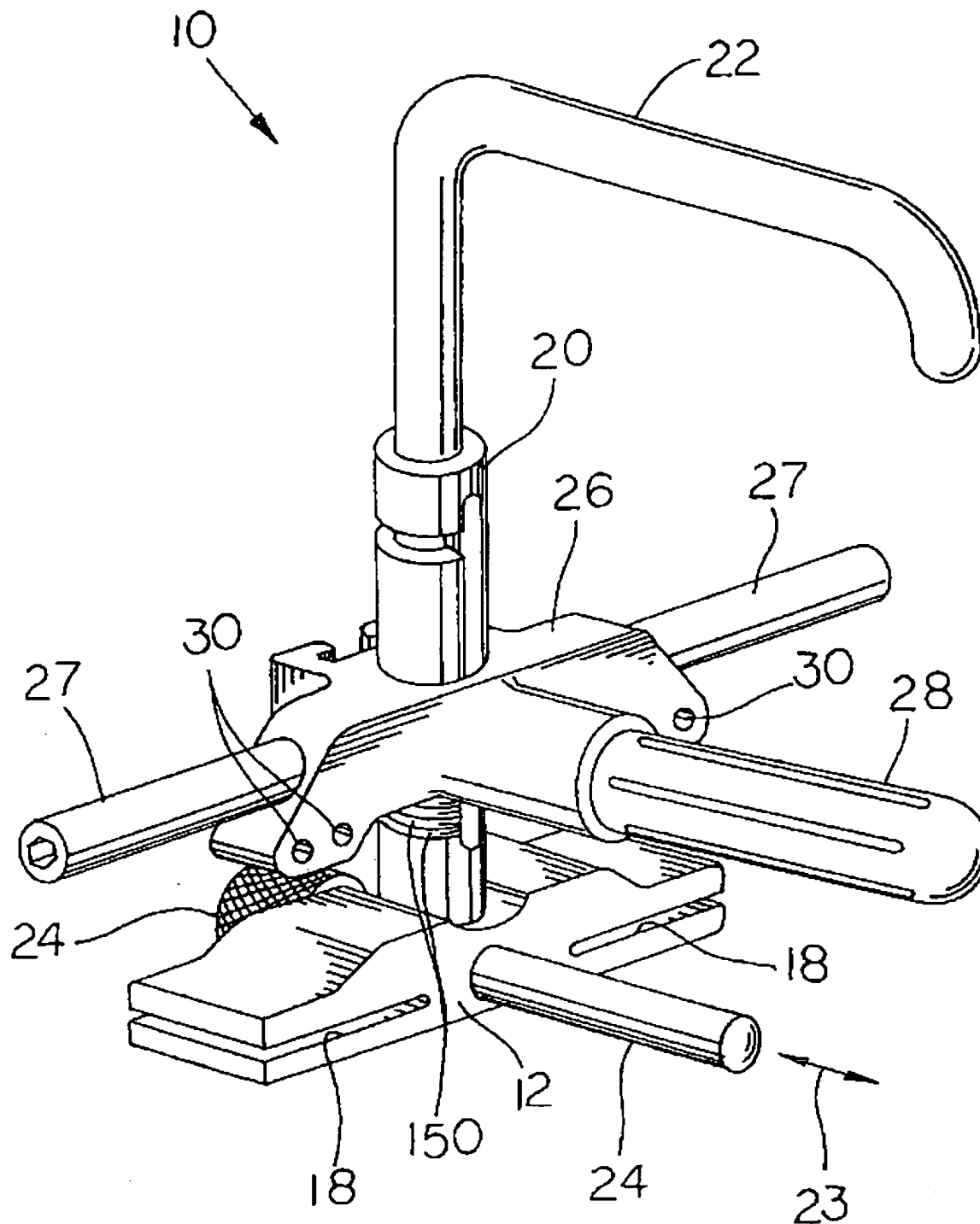
The tensor is configured to slidably carry a sizing rod which contacts the **femur** and includes a plurality of markings, which relate to the size of the **femur** as well as the spacing between the **femur** and tibia. This information is used by the surgeon to select the proper size of **femoral** and tibial articulate surface components. The sizing rod also indicates to the surgeon any variation required in the amount of bone to be **resected**.

USE - For sizing **femur** and polyethylene components, and providing indications of proper alignment and assisting surgeon to provide proper soft tissue balance for joint.

ADVANTAGE - **Knee** joint may be placed in tension in flexed and-or extended position during surgery.

Dwg.9/12

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Derwent Class: P31
International Patent Class (Main): A61B-017/15
File Segment: EngPI

21/19/9
DIALOG(R) File 350:Derwent WPIX
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011280186 **Image available**

WPI Acc No: 1997-258090/199723

XRPX Acc No: N97-213525

**Femoral resection instrument set e.g. for use in knee replacement surgery
- has three-dimensional jig which references anterior and posterior
femoral condyles to allow determinations as to alignment, placement and
prosthesis size prior to bone cutting**

Patent Assignee: CHERNESKY C (CHER-I); WIXON R (WIXO-I)

Inventor: CHERNESKY C; WIXON R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5624444	A	19970429	US 95386405	A	19950210	199723 B

Priority Applications (No Type Date): US 95386405 A 19950210

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5624444	A		14	A61B-017/15	

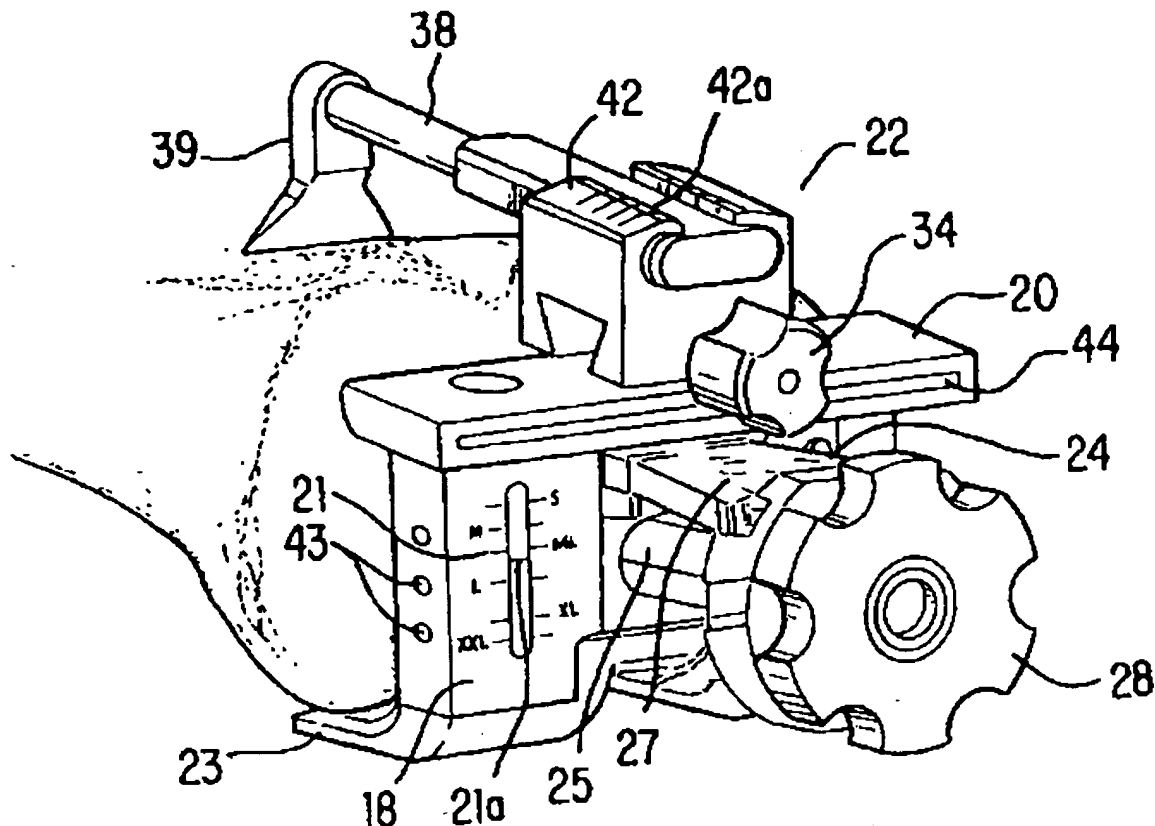
Abstract (Basic): US 5624444 A

The set of instruments comprises a jig comprising a body portion having parallel distal and proximal base faces, connected by parallel **posterior** and anterior base faces, where the proximal base face is adapted to abut the distal end of the **femur**. The jig further includes a **posterior** portion slidably engaged with the body portion for movement parallel to the proximal and distal base faces and the distal base face of the body portion including a first sizing indicator. The sliding movement of the **posterior** portion indicates varying sizes on the first sizing indicator. The **posterior** portion includes first and second skids extending in the proximal direction from the body portion, said skids having anterior faces adapted to contact the **posterior femoral condyles**.

The body portion of the jig further includes an aperture through its distal and proximal faces for receiving a bushing. A bushing extends through the distal face and adapted to receive an intramedullary rod, the bushing further including a valgus angle guide device adapted to adjust the angular position of the intramedullary rod within the range of 15 degrees below and 15 degrees above an angle of ninety degrees with the distal face of the body portion of the jig. A stylus is **removably** attachable to the anterior face of the body portion, the stylus including a cross bar slidably engaged with the stylus for movement in the proximal-distal direction and a second sizing indicator. The sliding movement of the cross bar indicates varying sizes on the second sizing indicator. There is a distal **cutting** guide **removably** attachable to the anterior face of the body portion, the distal **cutting** guide having a number of fixation holes and a slot for guiding a saw blade for making the distal **cut** for **resection** of the distal **femur**. The stylus and the distal **cutting** guide are both attachable to the anterior face but not simultaneously.

USE - For use in the preparation of the distal end of a **femur** for the **implantation** of a **femoral prosthesis**, which **implantation** requires **resecting** the anterior **femoral condyles** by making an anterior **cut**, distal **femoral condyles** by making a distal **cut** and first and second angle **cuts**, and **posterior femoral condyles** by making a **posterior cut**.

Dwg.3/22



Derwent Class: P31
 International Patent Class (Main): A61B-017/15
 International Patent Class (Additional): A61B-017/17
 File Segment: EngPI

21/19/13
 DIALOG(R) File 350: Derwent WPIX
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007899555
 WPI Acc No: 1989-164667/198922
 XRAM Acc No: C89-073158
 XRPX Acc No: N89-125633

Femoral spacer - is constructed to centre femoral prosthesis within re-sectioned femur with medical collar resting on calcar portion

Patent Assignee: PFIZER HOSPITAL PROD GROUP INC (PFIZ)

Inventor: BARBARITO J L; CYMBALUK W J; POGGIE M P

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4827919	A	19890509	US 86923256	A	19861027	198922 B

Priority Applications (No Type Date): US 86923256 A 19861027

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4827919	A		5		

Abstract (Basic): US 4827919 A

Femoral spacer for centering a femoral prosthesis within a

resectioned femur has a hollow body. The spacer is shaped such that a medial collar of the **prosthesis** can rest on the calcar portion of the **femur** and the underside of anterior and **posterior** shoulders of the spacer can rest on the **femur**.

The spacer may be made of a biocompatible metal e.g. cobalt chrome alloy or titanium alloy, a polymer e.g. ultra high molecular weight polyethylene or pref a polymethyl methacrylate or methyl methacrylate made radiopaque e.g. by addition of barium sulphate.

ADVANTAGE - Provides simple and reliable system for proper positioning of a **prosthesis** thereby reducing risk of **prosthesis** failure. It offers easy manipulation and insertion and is adaptable for use with various surgical techniques.

0/6

Derwent Class: A96; D22; P34
International Patent Class (Additional): A61M-037/00
File Segment: CPI; EngPI
Manual Codes (CPI/A-N): A12-V02; D09-C01
Plasdoc Codes (KS): 0037 0206 0066 0231 0239 0247 0500 3011 0535 2218 2220
2585 2681 3258 2765 2319
Polymer Fragment Codes (PF):
001 014 04- 041 046 047 049 06- 074 075 077 081 082 15- 19- 308 310 342
43& 50& 546 575 583 589 645 651 654 688 695 721 725
Derwent Registry Numbers: 1739-U

26/19/6
DIALOG(R)File 350:Derwent WPIX
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015168649 **Image available**
WPI Acc No: 2003-229177/200322
XRPX Acc No: N03-182416

**Cutting guide for resecting distal femur prior to implanting of
prosthetic component, has block fixable by fixing unit to distal femur
and formed with guiding surfaces**

Patent Assignee: AXELSON S L (AXEL-I); MCGOVERN M J (MCGO-I); MEYERS R K
(MEYE-I); STRYKER TECHNOLOGIES CORP (STRY-N)
Inventor: AXELSON S L; MCGOVERN M J; MEYERS R K
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030018338	A1	20030123	US 2000746800	A	20001223	200322 B
US 6558391	B2	20030506	US 2000746800	A	20001223	200338

Priority Applications (No Type Date): US 2000746800 A 20001223

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030018338	A1		19	A61B-017/90	
US 6558391	B2			A61F-002/38	

Abstract (Basic): US 20030018338 A1

NOVELTY - The guide has a block fixable by a fixing unit to a distal **femur** and formed with an anterior cutting guide surface, a **posterior** cutting guide surface, an anterior chamfer cutting guide surface, a **posterior** chamfer cutting guide surface, and a distal cutting guide surface.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following :

(a) a tool set for **resecting** distal end of distal **femur** prior to **implanting** of **prosthetic** component;

(b) and, a **resecting method** for distal **femur**.

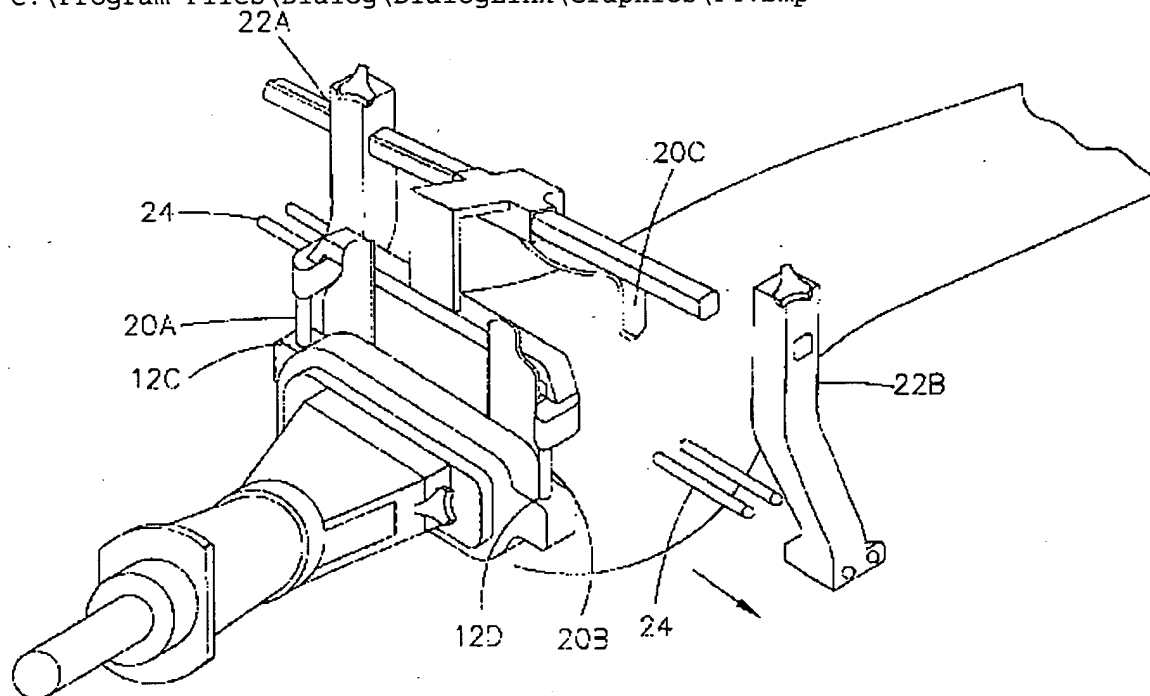
USE - For **resecting** distal **femur** prior to **implanting** of **prosthetic** component, during **knee arthroplasty** e.g. **replacement** of portions of patella, **femur** and tibia with **artificial** components.

ADVANTAGE - Reduces number of tools needed to perform **femoral resection**. Maintains proper alignment of e.g. **femur** while making multiple **resection cuts**. Improves accuracy of **femoral resection**. Allows intraoperative adjustment of **cutting guide** positions. Allows using of guide regardless of **femur** size. Simplifies attachment of guide to **femur** with minimal soft tissue impingement.

DESCRIPTION OF DRAWING(S) - The figure shows the isometric view of the **cutting guide**.

pp; 19 DwgNo 3/12

C:\Program Files\Dialog\DialogLink\Graphics\F4.bmp



Derwent Class: P31; P32

International Patent Class (Main): A61B-017/90; A61F-002/38

File Segment: EngPI

26/19/13

DIALOG(R) File 350:Derwent WPIX

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013530627 **Image available**

WPI Acc No: 2001-014833/200102

XRPX Acc No: N01-011196

Posterior compensation tray apparatus for replacing at least a portion of a proximal tibia has cross-section configured for coupling to proximal tibia resected to remove greater amount of bone from posterior end than anterior end of tibia

Patent Assignee: DEPUY ORTHOPAEDICS INC (DEPU-N)

ASRC Searcher: Jeanne Horrigan
Serial 10/616102
March 23, 2005

85

Inventor: ENGH G A; GERMAN D S; WEBB J R
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6139581	A	20001031	US 97871398	A	19970606	200102 B

Priority Applications (No Type Date): US 97871398 A 19970606

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6139581	A	14	A61F-002/38	

Abstract (Basic): US 6139581 A

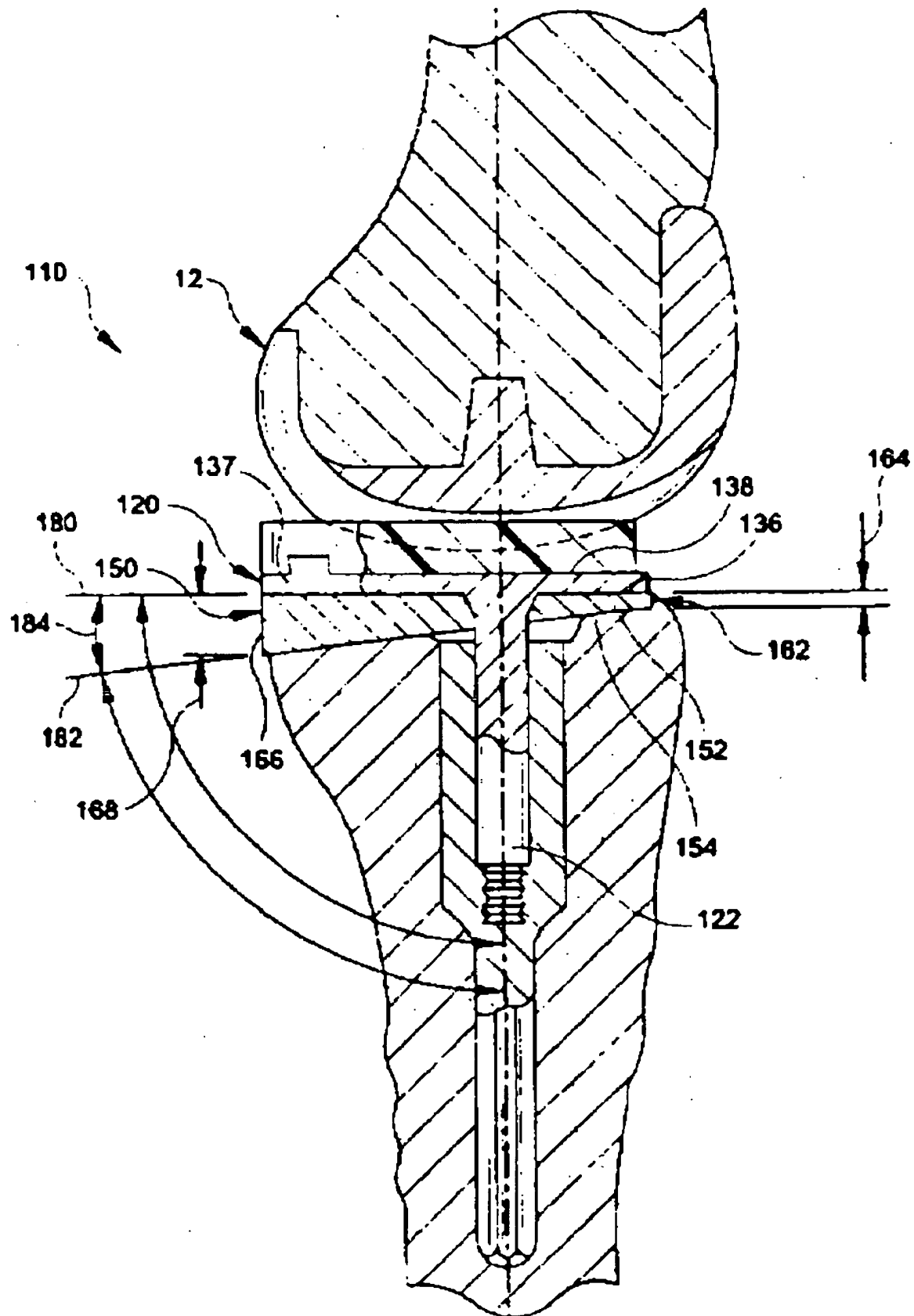
NOVELTY - The apparatus comprises a **posterior** compensation element (150) including a proximal surface (138) lying in a first plane, an opposite distal surface (136) configured for extension across the **resected** surface between the anterior and **posterior** ends, and a side wall extending between the proximal and distal surfaces. The side wall includes an anterior region having an anterior height and a **posterior** region having a greater **posterior** height. A stem (122) is unitary with and extends from the distal surface perpendicular to the first plane. A stem extension includes an interior surface defining a stem-receiving cavity in it and the stem is size

USE - **Prosthetic** tibial apparatus for replacing at least a portion of the proximal end of a tibia. For use in both primary and revision **knee replacement**. Tibial tray component is useful for preserving good bone.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-sectional view of the **prosthetic knee** after it has been assembled.

Femoral component (12)
Tibial tray component (110)
Plateau element (120)
Stem (122)
Distal surface (136)
Proximal surface (138)
Posterior compensation element (150)
pp; 14 DwgNo 2/7

C:\Program Files\Dialog\DialogLink\Graphics\F5.bmp



International Patent Class (Main): A61F-002/38
File Segment: EngPI

26/19/18
DIALOG(R) File 350:Derwent WPIX
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010632123 **Image available**
WPI Acc No: 1996-129076/199613
XRPX Acc No: N96-108595

**Knee asymmetric femoral prosthesis - has articulating surface portions
that are positioned in differing positions from non-articulating surface
plane**

Patent Assignee: SMITH & NEPHEW INC (SMIN); SMITH & NEPHEW RICHARDS INC
(SMIN)

Inventor: RIES M; SCHUMACHER B

Number of Countries: 021 Number of Patents: 010

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9603939	A1	19960215	WO 95US9705	A	19950801	199613 B
AU 9533599	A	19960304	AU 9533599	A	19950801	199623
US 5549688	A	19960827	US 94285917	A	19940804	199640
EP 773756	A1	19970521	EP 95930105	A	19950801	199725
			WO 95US9705	A	19950801	
US 5824105	A	19981020	US 94285917	A	19940804	199849
			WO 95US9705	A	19950801	
			US 97793027	A	19970501	
AU 700844	B	19990114	AU 9533599	A	19950801	199914
JP 11504226	W	19990420	WO 95US9705	A	19950801	199926
			JP 96506695	A	19950801	
EP 773756	B1	20021023	EP 95930105	A	19950801	200277
			WO 95US9705	A	19950801	
DE 69528655	E	20021128	DE 628655	A	19950801	200303
			EP 95930105	A	19950801	
			WO 95US9705	A	19950801	
ES 2185713	T3	20030501	EP 95930105	A	19950801	200341

Priority Applications (No Type Date): US 94285917 A 19940804; US 97793027 A
19970501

Cited Patents: US 4081866; US 5133759; US 5326361

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9603939	A1	E	38	A61F-002/38	
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Designated States (National): AU CA JP US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL
PT SE

AU 9533599	A			A61F-002/38	Based on patent WO 9603939
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US 5549688	A		12	A61F-002/38	
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EP 773756	A1	E		A61F-002/38	Based on patent WO 9603939
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Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC
NL PT SE

US 5824105	A			A61F-002/38	CIP of application US 94285917
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CIP of patent US 5549688

Based on patent WO 9603939

AU 700844	B			A61F-002/38	Previous Publ. patent AU 9533599
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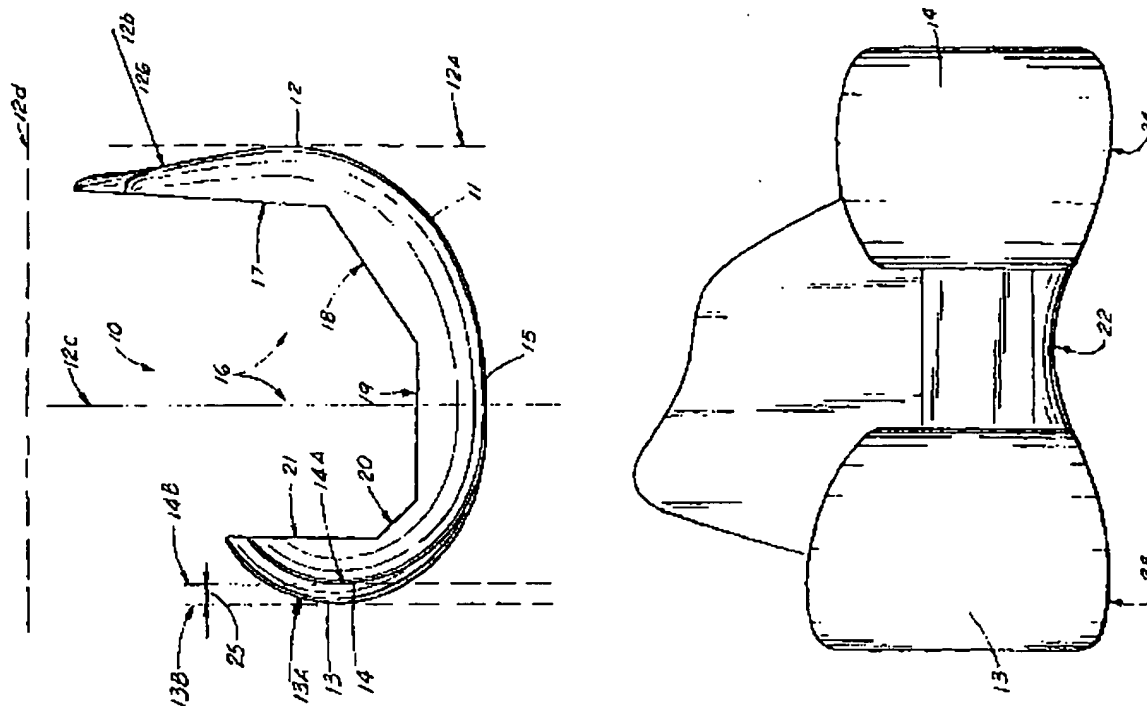
Based on patent WO 9603939

Abstract (Basic): WO 9603939 A

ADVANTAGE - Balances flexion and extension space, maintain proper alignment with tibia, and to not notch anterior **femoral** cortex when ninety degree (90 deg.) tibial **resection** and symmetric thickness tibial component is used, and provides improved **femoral prosthesis** which allows proper patella tracking during normal range of **knee** movement.

Abstract (Equivalent): US 5549688 A

Dwg. 1/19



Derwent Class: P32
International Patent Class (Main): A61F-002/38
File Segment: EngPI

26/19/19
DIALOG(R) File 350:Derwent WPIX
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010600456 **Image available**
WPI Acc No: 1996-097409/199610
XRPX Acc No: N96-081349

Knee condyle resectioning apparatus - comprises support with bases and adjustable three-section guide for cutting blades

Patent Assignee: BIOMICRON (BIOM-N); ORTHO DIFFUSION & RECH (ORTH-N);
BIOMICRON SA (BIOM-N); MEDICA PRO (MEDI-N)

Inventor: DE ROALDES O; DUVILLIER E; GINESTON J; GINESTON J M

Number of Countries: 020 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9601588	A1	19960125	WO 95FR923	A	19950711	199610 B
FR 2722392	A1	19960119	FR 948670	A	19940712	199611
EP 721314	A1	19960717	EP 95925034	A	19950711	199633
			WO 95FR923	A	19950711	
US 5749876	A	19980512	WO 95FR923	A	19950711	199826
			US 96612917	A	19960423	
EP 721314	B1	20000531	EP 95925034	A	19950711	200031
			WO 95FR923	A	19950711	
DE 69517296	E	20000706	DE 617296	A	19950711	200039
			EP 95925034	A	19950711	
			WO 95FR923	A	19950711	
ES 2149999	T3	20001116	EP 95925034	A	19950711	200064

Priority Applications (No Type Date): FR 948670 A 19940712

Cited Patents: EP 538153; EP 555003; FR 2664157; FR 2679766; FR 2681779

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9601588	A1	F	53	A61B-017/14	
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Designated States (National): CA JP US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL
PT SE

FR 2722392	A1			A61B-017/16	
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EP 721314	A1	F	1	A61B-017/14	Based on patent WO 9601588
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Designated States (Regional): BE CH DE ES FR IT LI NL

US 5749876	A			A61B-017/15	Based on patent WO 9601588
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EP 721314	B1	F		A61B-017/14	Based on patent WO 9601588
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Designated States (Regional): BE CH DE ES FR IT LI NL

DE 69517296	E			A61B-017/14	Based on patent EP 721314
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Based on patent WO 9601588

ES 2149999	T3			A61B-017/14	Based on patent EP 721314
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Abstract (Basic): WO 9601588 A

The apparatus, designed to shape **knee condyles** prior to fitting a **knee prosthesis**, consists of a support (14) with a base (15,16) made to engage with the **femoral condyles** (17), a guide (21, 24, 30) for **cutting** blades, adjustable relative to the support, an intramedullary **femoral** rod (28) for positioning and centering the guide, and feelers (56,57) for the anterior cortical section of the **femur**.

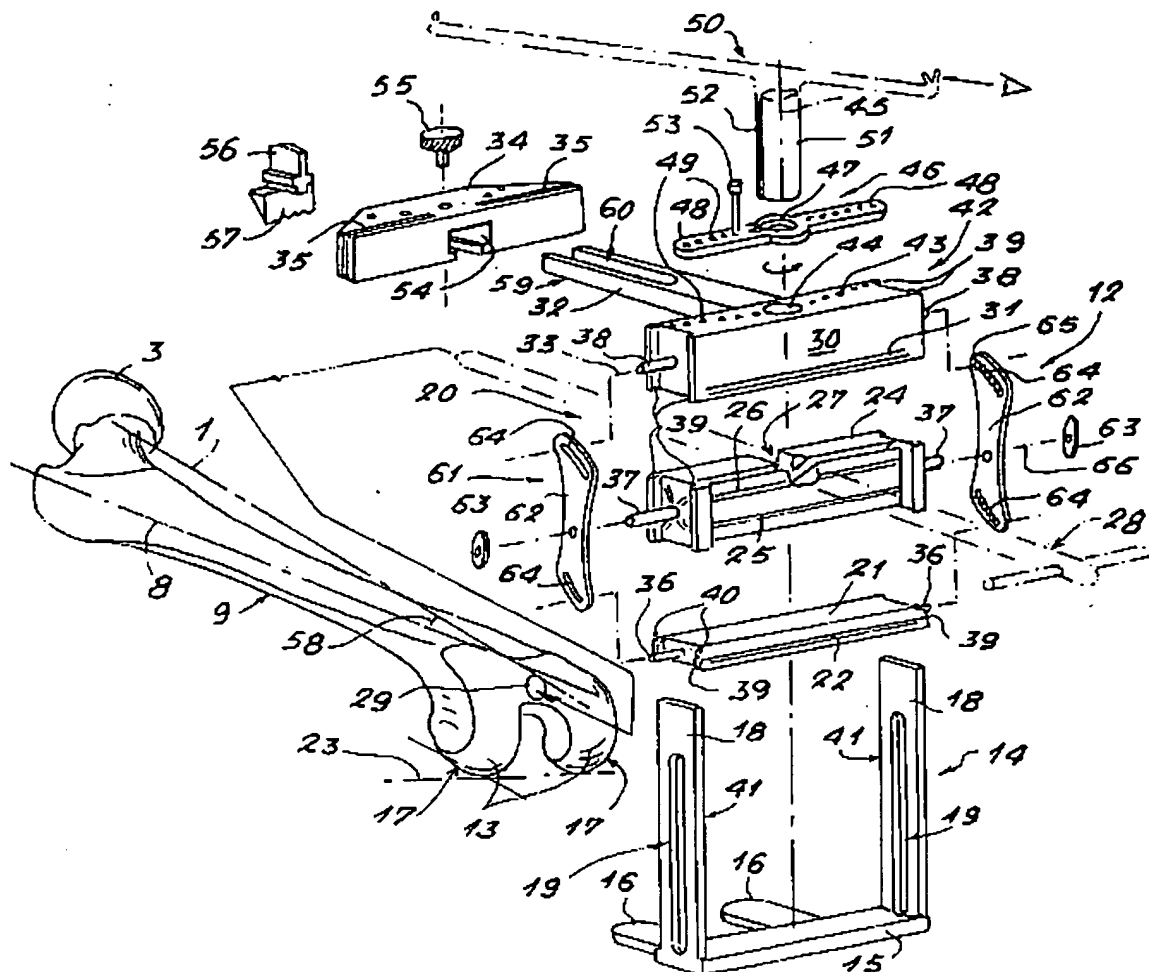
The **cutting** blade guide is in at least three sections (21,24,30), at least two of which can be moved relative to the support and are adjustable for height relative to one another. One of the sections has guides for anterior, **posterior** and bevel **cuts** and the others have guides for the remaining **cuts**.

The apparatus has a regulator for the guide section spacing, made in the form of two side plates (61,62) which can rotate about pivots (37) between two positions - one of maximum and the other for minimum spacing.

ADVANTAGE - Simple and reliable **resectioning** for precise **prosthesis** fitting.

Dwg.2/18

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Derwent Class: P31

International Patent Class (Main): A61B-017/14; A61B-017/15; A61B-017/16

International Patent Class (Additional): A61F-002/38; A61F-002/46

File Segment: EngPI

11997313 PASCAL No.: 95-0184485
Ligament release and bone grafting in total **arthroplasty** of the varus
knee. Discussion

WHITESIDE L A

Missouri bone joint cent., biomechanical res. lab., St Louis MO, USA

Journal: Orthopedics : (Thorofare), 1995, 18 (2) 117-123

ISSN: 0147-7447 CODEN: ORTHDK Availability: INIST-19164;

354000059812050020

No. of Refs.: 8 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: USA

Language: English

A simplified technique is described for restoring joint line position, correcting bony defects, and achieving ligament balance in the varus **knee**. The thickness of the **implant** is **resected** based on the intact surface at a predetermined 5 SUP o or 7 SUP o valgus angle. Resulting medial **femoral** and tibial defects are grafted with morselized cancellous autograft, and the medial ligaments are released from the tibial surface to achieve appropriate matching of varus/valgus **stability**. Four hundred twenty-three **knees** with varus deformity of 5 SUP o to 55 SUP o were followed for 2 to 7 years after surgery. Of the 98 **knees** with moderate varus deformity, two had grafting of minor tibial defects and none had **femoral** grafting. Of the 36 with severe varus deformity, three had grafting of the **femoral condyle** distal surface and 26 had medial tibial plateau grafting. Mean valgus angle 1 year after surgery was 5.3 SUP o, and yearly follow up revealed no tendency for deterioration of alignment. Bone graft collapse was not found in any **knee**. Radiographic analysis of the tibial grafts routinely demonstrated trabeculation of the graft 2 years **postoperatively**. Mean **postoperative** range of motion was 111 SUP o 1 year after surgery and 115 SUP o 2 years after surgery. No major complications were found as a result of either bone grafting or ligament release. This simplified technique of **resection** of the bone surfaces to match the thickness of the **implant** is safe and effective in the severely deformed varus **knee**. Experience has shown that **resection** to the bottom of large defects in the <Err>articular surface of the tibia results in difficulty in ligament balancing and problems with fixation due to loss of <Err>bone stock. <Err>Distal and **posterior femoral** <Err>articular surface deficiencies can also lead to errors in **resection**. If the worn <Err>articular surfaces are used as the reference point for **resection**, <Err>proximal

31/7/10 (Item 10 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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11222317 PMID: 9273378
Flexion space configuration in total **knee arthroplasty**.
Laskin R S
Hospital for Special Surgery, New York, New York 10021, USA.
Journal of **arthroplasty** (UNITED STATES) Oct 1995, 10 (5) p657-60,
ISSN 0883-5403 Journal Code: 8703515
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Equal resection of the posterior femoral condyles combined with a 90 degree tibial resection results in a trapezoidal flexion space. Two groups of patients were studied; in one group, the flexion space was allowed to remain trapezoidal, whereas in the other group, the anteroposterior femoral resections were externally rotated to allow rectangularization of the flexion space. In the second group, the range of flexion was increased and the incidence of medial tibial pain and zone I radiolucencies decreased. Other than for knees in a hypervalgus position before surgery, the mean amount of rotation required was 3 degrees +/- 0.2 degrees.

Record Date Created: 19970822

Record Date Completed: 19970822

31/7/11 (Item 11 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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11019399 PMID: 7798105

Insall-Burstein posterior-stabilized knee prosthesis in rheumatoid arthritis.

Aglietti P; Buzzi R; Segoni F; Zaccherotti G

First Orthopaedic Clinic, University of Florence, Italy.

Journal of arthroplasty (UNITED STATES) Apr 1995, 10 (2) p217-25,

ISSN 0883-5403 Journal Code: 8703515

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The authors reviewed 65 Insall-Burstein (Zimmer, Warsaw, IN) total condylar posterior-stabilized knee prostheses in 50 patients with rheumatoid arthritis with a follow-up period of at least 5 years (range, 5-13 years). Forty-two knees in 31 patients were evaluated using the Knee Society knee and functional rating scores. Radiographic assessment was performed using standing long radiographs (hip to ankle). Radiolucent lines were studied using fluoroscopic-centered views. Excellent or good clinical results were obtained in 95% of the cases, and the average knee score improved from 22.5 to 90 points. No cases of radiologic loosening were observed. Incomplete radiolucent lines around the tibial component were detected in only 17% and were nonprogressive. Two patients developed hematogenous late deep infection, which required removal of the prosthesis in both, followed, at a second stage, by arthrodesis in one and prosthesis reimplantation in the other. Three knees (7%) had a painful impingement of the patella. Two of these were successfully reoperated with arthroscopic debridement of the peripatellar synovial tissues. Survivorship analysis, based on endpoints such as prosthesis removal for any cause or radiologic loosening (complete radiolucent line thicker than 1 mm, tilt, or subsidence of the component), showed a cumulative success rate of 96.2% at 13 years.

Record Date Created: 19950803

Record Date Completed: 19950803

31/7/12 (Item 12 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

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08429312 PMID: 3199137

Should the **posterior** cruciate ligament be retained or **resected** in **condylar nonmeniscal knee arthroplasty** ? The case for **resection** .

Freeman M A; Railton G T

London Hospital, Whitechapel, England.

Journal of **arthroplasty** (UNITED STATES) 1988, 3 Suppl pS3-12, ISSN

0883-5403 Journal Code: 8703515

Publishing Model Print

Document type: Case Reports; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The arguments for **resection** of the (anterior and) **posterior** cruciate ligament(s), as a step in total **knee arthroplasty**, are reviewed on the basis of the authors' personal experience and the work of others published in the literature.

Record Date Created: 19890126

Record Date Completed: 19890126

41/7/5 (Item 1 from file: 73)
DIALOG(R) File 73:EMBASE

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06661787 EMBASE No: 1996326664

Femoral rotational alignment using the tibial shaft axis in total **knee arthroplasty**

Stiehl J.B.; Cherveny P.M.

2015 East Newport Avenue, Milwaukee, WI 53211 United States

Clinical Orthopaedics and Related Research (CLIN. ORTHOP. RELAT. RES.)

(United States) 1996, -/331 (47-55)

CODEN: CORTB ISSN: 0009-921X

DOCUMENT TYPE: Journal; Conference Paper

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

The capability of determining **femoral** component rotation by using a **posterior femoral condyle resection** made perpendicular to the longitudinal tibial shaft axis in **posterior** cruciate retaining total **knee arthroplasty** was evaluated. From 100 consecutive cases, 54 used the **femoral posterior condyle** axis and 46 used an extramedullary alignment rod based on the tibial shaft axis. Seventy-two percent of total **knee arthroplasties** using the **posterior condyle** axis required lateral release versus 28% using the tibial shaft axis. Patellar fracture occurred in 7% using the **posterior condyle** axis versus none using the tibial shaft axis. Two patients had both techniques in opposite **knees**. Using computed tomography, the **posterior condyle** axis method gave a **posterior condyle** angle of 5degree and 4degree compared with the transepicondylar axis, whereas the tibial shaft axis technique measured 0degree and 1degree. The **posterior condyle resection** using the tibial shaft axis restores the anatomic patellofemoral relationships, minimizing patellofemoral complications.

41/7/6 (Item 2 from file: 73)

0007091548 BIOSIS NO.: 199089009439
AN ANALYSIS OF THE SURVIVAL RATE OF TOTAL- **CONDYLAR TOTAL KNEE**
PROSTHESES WITH POSTERIOR STABILITY
AUTHOR: AGLIETTI P (Reprint); SCROBE F; GAUDENZI A; BUZZI R; ALLEGRA M
AUTHOR ADDRESS: I CLINICA ORTOPEDICA DELL'UNIV, FIRENZE**ITALY
JOURNAL: Italian Journal of Orthopaedics and Traumatology 14 (4): p419-428
1989
ISSN: 0390-5489
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Survival rate **tables** are an adequate and relatively new means of evaluating **prostheses** of the **knee**. These **tables** may be used to make a clear distinction between success and failure. In a study of 160 **prostheses** followed-up over a period of 9 years, a Total- **Condylar knee prosthesis** with **posterior stability** has a 90% probability of surviving for the entire period, based on mechanical and radiological failures, and a 96% probability based on failures that required its **removal**. The probability of mechanical or radiological failure is 1% per annum.

44/7/10 (Item 10 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2005 Elsevier Science B.V. All rts. reserv.

04880511 EMBASE No: 1992020726
Bone preparation techniques for cementless fixation of total knee replacement
Whiteside L.A.
DePaul Biomechanical Research Laboratory, 3165 McKelvey Rd., St. Louis, MO 63044 United States
Techniques in Orthopaedics (TECH. ORTHOP.) (United States) 1991, 6/4 (8-14)
CODEN: TEORE ISSN: 0885-9698
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Reliable, simple techniques are mandatory for cementless total **knee arthroplasty** to be successful in a high enough acceptable percentage in current orthopaedic practice. Correct alignment and rigid initial fixation are two prerequisites to successful, durable **arthroplasty**. Decision making and planning for total **knee replacement** can be simplified by using 5degree to 7degree valgus angle at the **knee** for all patients. When this valgus angle is **cut** on the distal surface of the **femur**, and the tibia is **cut** perpendicular to the long shaft of the tibia, the two angles together produce a 5degree to 7degree angle at the **knee**. Bone preparation should **remove** as little bone stock as possible, and a **resection** level should be chosen so that ligament attachments maintain their proper distances from the joint surface. **Stability** of seating of the medial and lateral surfaces of the **femoral condyle** on adequate bone stock is of utmost importance for fixation of the **femoral** component. Seating **posteriorly** and laterally is necessary to transfer weight-bearing loads when the **knee** is in the flexed position. If this distal and **posterior** seating and **stability** cannot be achieved then extensive bone grafting and augmented fixation of

the component must be done to restore bone stock.

44/7/14 (Item 14 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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10531806 PMID: 8119008

The patellar "clunk" syndrome after **posterior stabilized total knee arthroplasty**.

Beight J L; Yao B; Hozack W J; Hearn S L; Booth R E

Jeanes Hospital, Philadelphia, Pennsylvania.

Clinical orthopaedics and related research (UNITED STATES) Feb 1994,
(299) p139-42, ISSN 0009-921X Journal Code: 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

In 20 patients with patellar "clunks" after **posterior stabilized total knee arthroplasty**, the average time to presentation was 10.7 months **postarthroplasty**. All patients demonstrated an audible and often painful "clunk" during extension. Fourteen procedures (11 arthroscopic debridements and three patellar component revisions) were performed in 12 patients. At reoperation, a suprapatellar fibrous nodule was seen to wedge into the intercondylar notch during flexion and dislodge during extension, generating the symptoms. The disorder resolved after nodule **excision**. Although four recurrences arose after arthroscopic debridements, none developed after arthrotomy and patellar button revision. **Femoral** component design, **postsurgical** inflammation, and altered extensor mechanics are potential etiologic agents of this complication.

Record Date Created: 19940407

Record Date Completed: 19940407

44/7/17 (Item 17 from file: 73)
DIALOG(R) File 73:EMBASE
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06106403 EMBASE No: 1995137043

Insall-Burstein **posterior -stabilized knee prosthesis** in rheumatoid arthritis

Aglietti P.; Buzzi R.; Segoni F.; Zaccherotti G.

Largo P. Palagi 1, Florence Italy

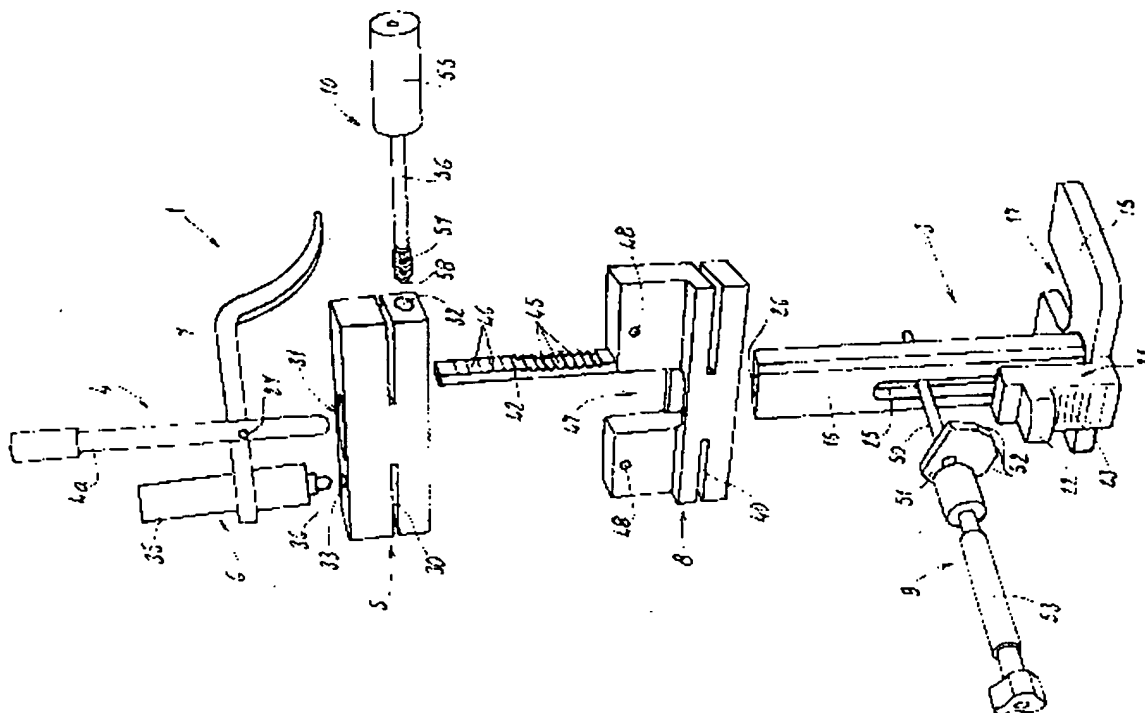
Journal of **Arthroplasty** (J. **ARTHROPLASTY**) (United States) 1995, 10/2
(217-226)

CODEN: JOARE ISSN: 0883-5403

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

The authors reviewed 65 Insall-Burstein (Zimmer, Warsaw, IN) total condylar **posterior -stabilized knee prostheses** in 50 patients with rheumatoid arthritis with a follow-up period of at least 5 years (range, 5-13 years). Forty-two **knees** in 31 patients were evaluated using the **Knee Society knee** and functional rating scores. Radiographic assessment was performed using standing long radiographs (hip to ankle). Radiolucent lines



Derwent Class: P31
International Patent Class (Main): A61B-017/15
File Segment: EngPI

21/19/4
DIALOG(R)File 350:Derwent WPIX
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013238331 **Image available**
WPI Acc No: 2000-410205/200035
Related WPI Acc No: 1998-397840; 1999-288137; 2000-441277; 2003-615677;
2004-058809
XRPX Acc No: N00-306459

**Planar resection forming apparatus for use in forming planar resection on
medial and lateral condyles of femur, has measurement system with scale
for indicating distance of parts in femur**

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Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6059788	A	20000509	US 95455985	A	19950531	200035 B
			US 97956015	A	19971022	

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Patent Details:

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US 6059788	A	39	A61B-017/58	Cont of application US 95455985 Cont of patent US 5776137

Abstract (Basic): US 6059788 A

NOVELTY - A measuring system indicates the distance between the anterior surface of a **femoral** cortex and a prospective planar **resection** from **posterior** of medial and lateral **condyles** of a **femur**. The measurement system has a scale (71) having markings (72) representing graduated size of **prostheses** and identifying distance difference between an anterior contact and a measurement piece and a **prosthetic** size.

DETAILED DESCRIPTION - The measurement also includes a tangential contact placed on a plane tangential to the medial and lateral **condyles**. The measurement piece pivots relative to the tangential contact about an axis in the tangential plane. The anterior contact contacts the anterior surface of the **femoral** cortex. An INDEPENDENT CLAIM is also included for a planar **resection** forming **method** on medial **condyle** and lateral **condyle** of **femur**.

USE - For use in forming planar **resection** on medial and lateral **condyles** of **femur**.

ADVANTAGE - Enables formation of planar **cuts** to anterior surface, **posterior** surface and distal ends of medial and lateral **condyles** of **femur** to form seating surfaces for receiving **femoral knee prosthesis**, with accurate anatomic dimension measurements.

DESCRIPTION OF DRAWING(S) - The figure shows the end view of a tool for measurement in planar **resection** formation.

Scale (71)

Markings (72)

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